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AMERICAN COUNCIL ON EDUCATION

The Citizens Conference on the Crisis in Education[1]

THE President of the United States opened the Citizens Conference on the Crisis in Education with the following words of welcome:

"It gives me a great deal of pleasure to welcome you here.

"I have been requested from time to time by our leading educators and other public men to see if some preliminary steps could not be inaugurated that would lead to a better understanding of our immediate educational problems, and the consequence has been the invitation extended to you for perhaps preliminary consideration, but in any event, to study the subject and see what thought could be developed.

"Our nation faces the acute responsibility of providing a right of way for the American child. In spite of our economic, social and governmental difficulties, our future citizens must be built up now. We may delay other problems but we cannot delay the day-to-day care and instruction of our children.

"This Conference is unusual, in that it invites the cooperation of men of widely different points of view in the consideration of our school and tax system from the standpoint of maintaining the welfare of the children of today.

"Our governmental forces have grown unevenly and along with our astounding national development. We are now forced to make decisions on the merits of the various expenditures. But in the rigid governmental economies that are requisite everywhere we must not encroach upon the schools or reduce the opportunity of the child through the school to develop adequate citizenship. There is no safety for our republic without the education of our youth. That is the first charge upon all citizens and local governments.

"I have confidence that with adequate reduction of expenditures there can be ample amounts obtained from reasonable taxation to keep our school system intact and functioning satisfactorily. Those in charge of the schools must be willing to face conditions as they are, to cooperate in discarding all unnecessary expenditure, to analyze all procedures, and to carry forward on a solid basis of economy. But the schools must be carried on.

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[1] Report of Proceedings prepared by the Agenda Committee.

"I wish to thank you for giving of your time and coming here to Washington for this meeting. I trust that out of it will come recommendations that will be of national significance. Above all, may I ask that throughout your deliberations you bear in mind that the proper care and training of our children is more important than any other process that is carried on by our government. If we are to continue to educate our children, we must keep and sustain our teachers and our schools."

This Conference was called by the President and presided over by the Secretary of the Interior. It met in the National Academy of Sciences Building in Washington, January 5-6, 1933. It was organized by the cooperative effort of the American Council on Education, American Farm Bureau Federation, American Federation of Labor, National Association of Manufacturers and the National Grange. These organizations, acting through an Agenda Committee in Washington, selected the delegates to be invited, chose the topics for the agenda, and arranged the details of the program.

Delegates were invited from twenty-eight states. Each was known to the members of the Agenda Committee to have particular interest in the matters which the Conference was called to consider. They represented widely different points of view. Of the one hundred and twenty invited, seventy attended. These came from the following twenty-one states: California, Connecticut, District of Columbia, Florida, Georgia, Illinois, Indiana, Iowa, Kentucky, Maryland, Massachusetts, Michigan, Minnesota, New Jersey, New York, North Carolina, Ohio, Pennsylvania, Rhode Island, Virginia, Washington, West Virginia.

Among the seventy who attended, there were eleven labor leaders, eleven agricultural leaders, six leaders in business and industry, four experts in taxation and budget making, two economists and political scientists, two lawyers, six leaders of civic organizations, ten university presidents and professors, ten state and city superintendents and other leaders of public education, two government officials, and six men of various other professions but interested in this topic.

As an introduction to the business of the Conference, Secretary Wilbur stated that the mission of the Conference, as defined by the President, is to recommend readjustments in education and reductions in Government expenditures that recognize the right of way of the children of America and the necessity for their adequate protection in whatever is done.

The agenda presented to the meeting contained many statistical facts significant of the present situation. For example, they showed the decreasing national income; the increasing unemployment; the decreasing export trade; the increasing federal, state and municipal indebtedness; the decreasing scale of wages; the increasing tax burdens; and the decreasing farm income.

As regards the schools, the data submitted showed the increasing enrollment in public schools, particularly at the higher levels; the decreasing number of youths over fourteen years of age gainfully employed; the increasing per capita costs of public education; the decreasing funds available for support of schools; the increasing capital outlay and school indebtedness; and the decreasing teachers salaries.

A special pamphlet on the Current Situation in Education, prepared by the U. S. Office of Education and the Research Division of the National Education Association, gave the conference the latest available figures concerning the school situation. These showed that there was relatively little reduction in current expenditures for operation of schools for the school year ending June, 1931, and a reduction of a little over 6 per cent in those expenditures for the year ending June, 1932. The amount of the reduction was different in different sections of the country, being 16 per cent in the south central section, 13 per cent in the western section, 10 per cent in the north central section. Reductions as high as 29 per cent were noted in particular states. Expenditures for capital outlay decreased from 365 million dollars in 1930-31 to 154 million for the current year, a reduction of nearly 60 per cent for the two-year period. On the other hand, the expenditures for debt service have not decreased. These amount to about 15 per cent of the total expenditures for schools.

Reports just received from certain states indicate that the situation is becoming critical this year. For example, in Alabama nearly 1,000 rural schools have been unable to open this week for lack of funds. This leaves about 90,000 children without any schools at the present moment. Recent reports from Arkansas indicate that the situation is almost as serious in that state.

From data such as these it appears that expenditures for schools are being reduced, that the pressure for reduction is becoming more insistent, and that it has reached in some communities the point where no schools are being maintained.

Documents were also submitted to the conference showing the relative expenditures for schools and other public services in particular communities. For example, an analysis of county tax budgets in the State of Tennessee showed that approximately 24 per cent of the total tax levy goes for interest and sinking fund requirements, 44 per cent for schools, 15.2 per cent for highways and bridges, and 16.8 per cent for other county purposes. The conclusion drawn by the committee which made this report is: "County indebtedness is the chief cause for the high tax rates prevailing in the several counties at the present time, and these improvements are chiefly responsible for the rise in taxes beginning 1917. The tax rate will continue high in most counties until the debts are retired."

Another report submitted to the Conference from the Taxpayers' Association in Illinois showed that the costs of civil government in counties that are organized as single units are less than half the costs of counties that are organized as a group of townships. If all counties outside of Cook County were organized as single political units and the township organization were given up, the taxpayers would have better civil government with a saving of some $5,000,000, which is about half of the present cost. Thus one of the major questions facing the taxpayers of Illinois, as well as of other states, is whether it is better for the future generation to pay this extra $5,000,000 each year for the sake of preserving outworn political tradition than it is to modernize the organization of local civil government and put some of the $5,000,000 thus saved into better schools.

Another of the documents submitted to the Conference contained a similar study of the wastes due to the district school system. This showed how the local tax levy could be reduced four and a half million dollars out of nine and a half million and better schooling be given the children by proper methods of consolidation.

Another of the significant documents presented described an experiment in enriching the educational offerings in small high schools by correspondence work conducted by the University of Nebraska. By this plan the cost per student per subject per term may be reduced as much as half with an actual increase in the efficiency of instruction.

To supplement the data contained in the documents presented to the Conference, each member was given ample opportunity during the meeting to submit data and constructive suggestions for consideration. A number of such suggestions were submitted by individuals. For example, the Chairman, Secretary Wilbur, raised the question whether, since the education of children cannot be postponed without serious national injury while the building of roads can be so postponed, a considerable portion of the money now collected from gasoline taxes and spent for building roads might not better be spent for support of schools.

During the afternoon session, statements were made by representatives of the five national organizations that were cooperating in the conference. These statements contained additional important data and suggestions as to constructive methods of dealing with the situation. They will be printed in full in the report of the meeting.

During the afternoon session an announcement was made of the sudden death of ex-President Calvin Coolidge. The Conference adjourned out of respect to his memory. At a later session appropriate resolutions were passed and ordered sent to Mrs. Coolidge.

In the evening the Conference met in the Chamber of Commerce of the United States in six sub-committees: one on the relation of expenditure for education to expenditure for other public services; one on the organization and operation of instruction; one on buildings and equipment; one on free schooling at higher levels; one on the relation of schools and other social agencies; and one on legislation. Officers of these sub-committees were appointed by the Chair. The remaining delegates were allowed to distribute themselves among the committees as each saw fit. Reports from these sub-committees were presented at the Friday morning session.

The recommendations of these sub-committees were discussed, amended and adopted. The Agenda Committee was instructed to consolidate these reports, edit them and publish them, as the findings of the Conference. The sub-committee reports will be published in full in the complete report of the meeting. The Declaration of Policy that follows contains their substance as compiled by the Agenda Committee.

In closing the Conference, Secretary Wilbur said:

"We have all met here to discuss a very practical question, a question that is going to be decided in a thousand or more places, by school boards, by legislature, perhaps by Congress, by superintendents of schools, and the decisions made by all of these individuals are going to determine in a large measure just what will happen to this generation of American children.

"The likelihood of suddenly coming out to clear skies is not very great. We have to think, it seems to me, in terms of an emergency that will last over the decisions of this year. So that I ask you as you go back to your various communities and to your responsibilities to bear in mind that you came here for just one purpose, and that was to see what could be done under our American system to be sure that our boys and girls of this particular period are not robbed of their birthright in education. That is what this is all about.

"I stated here that I thought highways less important than schools. I still think so. You didn't think it worth while to do anything about that. You now have the responsibility of proposing something just as practical as that, and of seeing that whatever is practical in the resolutions that are passed gets into the hands of the people that make the decisions.

"If you are going to pay school teachers you have got to get the money to pay them, and that money now is going to be sought for from a dozen sources. So that we must take an aggressive attitude for the schools if we are going to see our children through. This is not a matter of passing resolutions. It is a matter of fighting, and there is no better thing to fight for than the American school child. I want to leave with you as you go that challenge, fight through for those American school children, fight the highways, fight the politicians, fight all the groups. It is worth while."

Declaration of Policy

1. Education is a fundamental obligation of public policy, related inseparably to long-term economic conditions and to the forms of governmental administration set up by organized society to provide for the general welfare.

2. Educational procedure must be evaluated eventually in terms of far-reaching and broadly inclusive social purpose.

3. In this conference we are concerned with one aspect of the educational problem—the adjustment of school costs to long-term economic conditions with no damage to the child.

4. Education is a necessity not a luxury since the growth of the child cannot be halted or postponed during an economic emergency. Therefore, educational service should be accorded a high degree of priority in determining the purposes and services which shall be supported by the States during a depression.

5. The major wastes in education should be eliminated through the abolition of control over, and interference with, education by politicians, of political appointments and of political corruption.

6. Local governments and local school districts should be reorganized and consolidated.

7. Administrative control of the schools must be centralized in the superintendent.

8. State administrative organization of education must be reorganized through the creation of a non-political and professional agency for the administration of the educational policies of the state, where such agency does not already exist.

9. The state must assume the responsibility within its means of assuring adequate public education to all local communities, irrespective of their financial condition.

10. We especially urge law-making bodies to give priority to legislation which will alleviate conditions in communities now being required to make injurious curtailments in their

school programs because of unusual burdens, inequitable tax systems or faulty fiscal machinery.

11. We urge Congress to provide for federal assistance through emergency loans for a limited period to such states as may make an adequate showing of their inability to maintain reasonable standards of support for public school education.

12. All governments, local, state and national, should direct attention to the immediate reformation of the system of taxation.

13. Immediate efforts should be made through the raising of the general level of commodity prices, the correction of serious economic maladjustments, and otherwise, to increase the volume of income and purchasing power, and thus to provide the moneys necessary for a proper educational program. If this is not done, widespread injury will result, not only to the cause of education, but to the value of all obligations, public and private.

14. The Conference is deeply impressed with the seriousness of the present situation but feels that the suggestion of adequate remedies is beyond the scope of its instructions and mission; therefore this Conference respectfully directs the attention of the President and of the Congress to the danger of gross injury to the cause of education through injudicious and unwise reduction of educational programs, the closing of schools, and otherwise, consequent upon economic conditions.

15. This Conference recommends the careful consideration by another conference or otherwise, of steps deemed appropriate and necessary for increasing the level of income and of purchasing power.

16. The Conference is opposed to the shortening of the school year below the term existing previous to the depression, because such action will be a limitation upon the educational opportunities of the children, which in the long run will be neither economically nor educationally profitable.

17. The teaching load should not be increased either in courses or hours, beyond the ability of the individual teacher to offer a reasonable standard of instruction to each pupil, and

should be adjusted in relation to the quality of supervision, the experience and qualifications of the teacher, the provisions for exceptional pupils, and the methods of grouping pupils.

18. The size of classes in all special subjects such as art, music, manual and domestic arts should be made as large as that of the average academic class; in secondary schools laboratory periods in the sciences should be of the same length as periods of other subjects, and standards of accrediting agencies which now prevent such arrangement should be modified.

19. All possible economies in school costs such as the postponing of building construction when and where practicable; the reorganization of business departments; the adjustment of the size of class; and the curtailing of the activities of auxiliary agencies, etc., should be made before a readjustment of teachers' salaries is effected.

20. Readjustment of salaries, if necessary, should be made in relation to the reduction in the cost of living of the teaching group in any given community.

21. School systems should weigh carefully any proposed curtailment policy with the view to securing real saving rather than to effect apparent economy that may be harmful to essential educational standards.

22. Every effort should be made by school systems to utilize to their full capacity the present school plants. A study of conditions in various parts of the country has shown that in some communities much better utilization of school buildings for class purposes can be effected.

23. The curtailment of school building construction will be reflected in the industrial and business life of a community by increasing the amount of unemployment and perhaps causing greater expenditures for relief work.

24. Consideration should be given in a long-term building program to the fact that unit costs are probably at a minimum at the present time and long deferred building construction may eventually cost twice as much as at present.

25. A distinction should probably be made between building needs that have accumulated over a period of years, and

the additional buildings needed each year by the normal increase in school enrollment. The first mentioned building needs may very properly be taken care of by a bond issue and the annual requirements may be met by the pay-as-you-go plan.

26. Maintenance costs should not be reduced below a point where resulting deterioration of the school plant would necessitate ultimately greater outlay than the original repairs would have cost. If the condition of the school plant has heretofore been maintained at a high level, curtailment in repair work may be adopted as a temporary policy.

27. Careful study should be made of the purchase, distribution, and utilization of fuel and other supplies used by building employees. The proper operation of heating plants should be carefully provided for. Janitorial work should be standardized. Proper training should be given to building employees both before entering the school service and after entering the system. The number of building employees should be kept at what is actually needed. In some communities considerable savings may be made in this field.

28. Careful attention should be paid to the preparation of proper specifications, the purchase, distribution, care and use of all supplies and equipment. Permanent inventories in all cases should be maintained. Where school districts are small, cooperative plans of purchasing supplies and equipment might be made under the initiative of state departments of education.

29. Rapid and unprecedented development of all forms of higher education during the past two decades, especially publicly supported higher education, not only reflects the distinctive character of our democratic idealism, but also furnishes conclusive proof of the reality of the long recognized principle of the equality of opportunity in American life. From these institutions has come a large proportion of the trained personnel of the established professions and the leadership of our complex industrial and social life. Furthermore, the results of the scientific research carried on by such institutions have been of well-nigh incalculable worth to the economic life of the nation. When viewed from these two standpoints alone

the general scheme of higher education of the country must be regarded as a principal, productive asset, the conservation and further development of which are matters of permanent concern for the states and for the nation.

30. The effective, economical and non-political operation and adaptation of the plan of popular education, at all levels, from the elementary schools through the universities, are fundamental obligations of the American state.

31. During a period of economic stress, such as that now existing, there is imposed upon all of those in positions of responsibility, whether in government, industry or cultural activity, a clear responsibility of affirming the inherent basis of our American plan, and of promoting confidence among the people in their educational institutions. In particular, efforts are needed to avoid any unnecessary reduction in the educational opportunities now available to American youth.

32. Today all publicly supported higher institutions, more than ever before, are responsible for the economical administration of their funds. There is abundant evidence that these institutions the country over are capable of making those adjustments in operation made necessary by any reasonable policy of retrenchment. They have already demonstrated their ability and their willingness to share the burden imposed upon the economic life of the people.

33. If the state is to have during the coming generation institutions adequate to serve its needs, it must not now unwisely weaken the human foundations of those institutions.

34. The essential limitation upon attendance on secondary schools of any grade is the requirement that the student give such evidence of a continuing and developing ability to learn, as shows that he is preparing himself better to meet the constantly advancing demands of an effective service for life.

The obligation of the states to afford an equality of educational opportunity is always predicated upon a reciprocal obligation of the individual to use such opportunities effectively.

35. We are impressed with the need of a better understanding of our social purposes and a clarification of our social values if the present crisis in education is to be turned to

future account. This is not a subject with which a single conference can deal, but the necessity for a nation-wide continuing effort to deal with this problem seems obvious.

36. The peculiar position of public education in our democracy, supported and guided by local initiative and directly accountable to it, suggests that there should be set up in every locality, councils broadly representative to mobilize and clarify public opinion in order to deal more generously and wisely with the present crisis in education.

37. The school is only one of the many educational agencies. The home, the church, the library, all must be maintained and strengthened along with the schools. Since education does not stop with childhood the agencies of adult education must not be forgotten. Special attention might be given to training for parenthood.

38. The Conference notes the critical condition of certain underprivileged groups, particularly the Negroes, and the necessity for special solicitude with regard to them. It is obvious that further diminution of educational facilities of this group would handicap them far in excess of the handicaps placed upon other children, and would hazard the possibilities of Negroes participating in our future society with a degree of efficiency commensurate with the demands. The attention of the country, therefore, is called to the fact that serious consideration should be given the past and present educational opportunities before attempting any further retrenchments.

39. We are impressed with the experience of various localities in moving promptly and energetically to maintain and extend their social services, particularly those of education, and we recommend that the Office of Education give nationwide continuing publicity to these efforts.

40. Because of the need of definite information on school costs at this time, the Conference regrets that the Congress found it necessary to discontinue the study of school finance carried on under the direction of the United States Office of Education, and expresses the hope that at an early date ways may be found to resume that important and especially timely study.

ALBERT W. ATWOOD, *Secretary.*

The Conference on College Admissions and Guidance

ON NOVEMBER 3 a conference on college admissions and guidance problems was held in New York City under the joint auspices of four organizations that have been active in the study of one or more phases of the problem of school and college relations—the Committees on Personnel Methods and on College Testing of the American Council on Education, the Commission on the Relation of School and College of the Progressive Education Association, and the Educational Records Bureau. The conference was notable not only for the penetrating analyses and constructive suggestions made by the speakers, but also for the attitude and large number of delegates that attended. The speakers on the program all represented institutions and organizations that have been in the front rank in study and research in the field of educational guidance, of which college admission is only one aspect.

The widespread interest in the subject matter of the conference is indicated by the fact that the attendance at all sessions was much larger than had been expected. Fully five hundred heard the addresses of Dr. Learned, Dean Johnston and President McVey. Of these, three hundred remained for the luncheon, at which Dean Boucher, of Chicago, was the guest speaker, and though it was necessary for many to leave New York before the close of the afternoon, two hundred gathered in the Egyptian Room for the formal dinner in the evening. Although it was impossible to obtain registration cards from all who attended the conference, approximately four hundred were filled out. Of these, 159 represented the colleges, including 15 presidents, over 40 deans and approximately the same number of registrars or directors of admission; 122 represented independent schools, among these being 58 heads and 23 associate or assistant heads.

The public schools were represented by 43 delegates, among whom were 8 superintendents and 13 principals. The United States Office of Education in Washington sent 3 representatives, State Departments of Education sent 5, and educational associations 17. This tabulation shows what a sweeping cross-section of the educational world was attracted by the subject under discussion and the list of speakers chosen to present the various topics that appeared on the program.

From the beginning to the end of the conference there could be felt an eagerness to cooperate and a harmony of purpose that augur well for the ultimate advancement of the common aims of the sponsoring organizations and of the organizations represented by the speakers. There was a ready willingness to recognize that no one person and no one group has a complete answer to the multitude of questions which need solution. There was also evidence of a readiness on the part of all to hear what others had to contribute and especially to listen to those who presented before the conference the points of view which emanated from progressive programs and experiments that have been carried on during the past few years.

There was repeated emphasis on the necessity for freeing admissions procedures from the restricting bonds which, by losing student and institution alike in a maze of red tape, have frequently defeated the purpose for which they were originally intended and have obscured what should be their main objective, a true and understandable picture of the individuality and abilities of each candidate for admission to college. Speaker after speaker emphasized the necessity for considering the student in the terms of his personal traits and interests, his capacities and his achievements. Each one stressed the necessity of regarding education as a continuing process and not as a series of separate and frequently unrelated courses that might have no part in, or relation to, the real life of the student himself.

The afternoon was given over to the Annual Meeting of the Institutional Members of the Educational Records Bureau, though this meeting was made an integral part of the entire conference and its agenda was drawn up particularly to include material that would be of value and interest to all. Following the opening address by President Robertson, who spoke of the development and the use of the American Council cumulative record forms for colleges and secondary schools, the various committees of the Bureau, which had met on the evening before, made their reports, revealing how much the Bureau has been doing since its organization in 1927 to contribute material of great value in accomplishing the very results advocated by all the speakers at the conference. The report of the Committee on School and College Relations will be published in the next issue of the EDUCATIONAL RECORD and shows clearly what concrete steps have been taken by the committee in the matter of progressive leadership in the betterment of college entrance procedures.

Up to the present time the Educational Records Bureau has served chiefly the independent or private schools of the country. Gradually, however, it has become evident that to undertake in any adequate way to be of service in furnishing material that can be widely used for admissions and guidance purposes by the colleges, the Bureau must provide for the eventual development of similar service to public schools. The report of Dr. A. B. Meredith, of New York University, the chairman of the Public Schools Advisory Committee, which had met for the first time on Wednesday evening, admirably set forth the Bureau's purpose of offering its service to public schools, both as a scoring and recording agency and as a central point for the assembling and statistical analysis of material which may be gathered from reliable scoring centers in different parts of the country.

In his report for the Committee on the Relation of the Primary and Secondary Schools, the Chairman, Mr. Charles B. Weld, of the Taft School, presented several resolutions designed to encourage the use of cumulative records of comparable test measures, as additional data to be considered by the secondary schools in selecting and classifying pupils from the elementary schools. These resolutions will perform a function similar to that performed by the recommendations presented to the colleges by the School and College Relations Committee.

An important part of the afternoon program was the contribution made by representatives of other organizations that have been working on some phase of the problem of school and college relations. Dr. Josephine Gleason, of Vassar, representing the Commission on the Relation of School and College of the Progressive Education Association, told of the Commission's proposal of a cooperative experiment in the education of prospective college students that had been presented to a large number of colleges and had met with an unexpectedly cordial reception.

"The first provision of the plan," said Dr. Gleason, "is that the schools selected for the experiment shall be free for a continuous period of five to eight years to experiment with the curriculum of college candidates. . . . New content may be introduced in the curricula, especially in the Arts and the Social Sciences; then the school programs will be sufficiently flexible to allow of adaptation to the individual student's needs and interests as they have not been in a good many schools, and it is also hoped that in the case of the individual student the school and college will cooperate in his guidance through the secondary school, so that he himself may get a view of his problem. . . .

"The second stipulation of the plan is that different criteria shall be offered for admission. The colleges shall receive, first of all, a recommendation from the principal of the school to the effect that the student has the capacity to do college work; that he has well-defined, intellectual interests and purposes; and, finally, that he is prepared to work in one or more fields in which the college is giving instruction. Then, in addition to that, the college will receive a cumulative record, detailed and comprehensive, following the student through his four years' career, giving his intellectual developments and behavior in general. This record will include the results of such tests and examinations as the directors feel will be illuminating."

Miss Gleason went on to say that "a tentative selection of ten of the experimental schools has been made. This group will include progressive schools, some experimental schools attached to universities, certain public high schools, and certain boarding schools which wish to experiment with their curricula. Already about 180 colleges and universities have officially agreed to participate in the experiment and the official acceptance of other colleges and universities is expected soon."

Mr. Twitchell, Chairman of the Bureau of Research of the Secondary Education Board, spoke particularly of the study of the secondary curriculum which the Board recently published and sent to a large number of colleges throughout the country. "That report," said Mr. Twitchell, "brings out above all else the absolute necessity of correlation between the subject fields in the curriculum and integration in those fields. . . . It came as the result of a call from our member schools and all the work which we carry on at the Secondary Education Board arises similarly from a demand on the part of the schools for a study of the problems which are common to them all. The curriculum study has been our major project. More recently we have embarked on a minor project which again ties up with the discussion here today, namely, the study of a cumulative record plan. At our last conference it was voted that because of extensive studies being carried on by these organizations represented here today, we should be content with acquainting ourselves with the needs of our own member schools and then keeping in touch with these organizations here represented, to find out what they are discovering through their studies. We have questionnaires from 81 of our member schools and enclosed with those questionnaires was a wide variety of forms used by the schools in recording the progress of the students. The diversity of these forms shows the need of some better standardized form that will meet all needs. Our study, in its present stage, is awaiting the result of the studies these other organizations are carrying on so that we may not duplicate them."

Though his name did not appear upon the program, Dr. Adam Leroy Jones, Director of Admissions at Columbia University, was called on and kindly consented to speak as an admissions officer and as a member of long standing in the College Entrance Examination Board. In speaking of the work of the Board, Dr. Jones said, "There is an illusion that the College Board invented entrance examinations. I assure you that they did not. They may be guilty of many things, but the examinations constituted the regular method of admission to college in the earliest college of this country. The first great service of the Board was to bring about much greater uniformity in entrance requirements, to bring about a situation in which you didn't have to read one set of Latin books if you were going to Yale, another if you were going to Princeton, etc. If you look back to the entrance requirements of the 90's, you will find that in most subject matters there were wide differences in the requirements of different colleges.

"Another illusion which I seem sometimes to detect is the idea that the Board is some kind of a metaphysical entity. It isn't. The Board is a cooperative undertaking on the part of certain colleges, and is the creature of those institutions, so that any one who objects to what the Board is now doing should attack the colleges and not this assumed metaphysical entity. The character of the Board is determined to a considerable extent by the fact that most of the people attending its meetings are in some way or other connected with admission to college.

"I suppose you know by this time that the admissions officer is gun-shy. He meets every day people who want to tell him just whom to admit to college from the enthusiastic alumnus who knows a prospective fullback to politicians and various others with axes to grind. You can see that, being accustomed to meeting that kind of situation, an admissions officer is likely to be a little bit hesitant about accepting every new idea that comes along, and it is that characteristic of admissions officers that I suspect has to do with giving to the history of the Board some of the traits that some of you very much dislike.

"I want to say, however, that even an admissions officer has not always a closed mind. Of course, there is such a thing as having a mind too much open. Some people have minds that are open at both ends. Now that kind of mind doesn't get along very well in the kind of job where his deeds come back on him; that is another way of saying that the admissions officer doesn't want to accept right away everything that comes to him. Most admissions officers are keen to know about and take into account information which will help them to do their jobs better. I think it is perfectly true to say that certainly in the colleges that I know best most of the officers of admission are interested in getting as complete a picture as possible of the students applying for admission. They may use bad judgment in selecting among those, but they are open-minded to the extent of wanting to know all the significant facts about the entering students. They are interested in experiments. There are various ways of being interested in experiments. Some people are willing to accept an experiment as soon as it has been planned; other people will not believe in the success of any experiment until it has been tried for at least fifty years. You will find people interested in this particular topic of college admissions all along the scale. I must say that those whom I have found willing to accept any experiment as a successful experiment, don't usually have to do practically with the selection of the students. Those that do are usually a little more hesitant than that.

"But I do think that much more than has been the case in any previous time, officers of admissions and organizations of people made up of those officers have their minds open to significant information. I don't know anyone with whom I have talked about these matters who will not welcome very greatly, in addition to other information, these cumulative records. It seems to me, therefore, that we are in the way of making progress, in the way of getting together on these subjects. The idea that we can cooperate, I think, is a very good idea to bring forward.

"Dr. Learned, it seems to me, presented the matter very completely and satisfactorily this morning.

"You know if in your attitude toward the other fellow you assume or imply that what he is doing is outworn and ought to be scrapped, or that what you have is entirely satisfactory and what he is presenting are the mere jabberings of a disordered mind, you are not going to get very far. If you tell any man at the beginning of an argument that he has no intelligence, you destroy his confidence in your judgment once for all. I think we here have gotten away from that sort of thing, and it seems to me to be one of the most favorable signs in the educational world at the present time. We are getting to the point where we are willing to see what the other person has to offer and to use it if we can use it. We are not always agreed on how long a thing must be tested before it can be employed, but we have made a lot of progress if we can respect the other person's opinions. This idea of cooperation is, of course, one that we hear talked about a great deal and sometimes it is intelligent and sometimes it isn't. It seems to me that we have in these meetings a very good augury of what can be done toward bringing together the contributions of the various agencies interested in these problems, and a vision of what officers of admission may have as materials with which to deal in the future."

The main purpose of this conference was to bring together as many as possible of those who would welcome an opportunity to discuss a few closely related problems of education in the light of the contributions made in recent years by such educational programs as have been conducted by the Carnegie Foundation for the Advancement of Teaching through the Pennsylvania Study, the Cooperative Test Service and the Committee on College Testing, and the Educational Records Bureau.

There is need for mutual understanding of purpose and methods. There is need also for cooperation in defining and clarifying objectives, in coming to an agreement upon terms and tools, and in strengthening through common interest and endeavor those undertakings which are at the same time sound and progressive and which will enable all to work more intelligently and successfully for the development of our student youth.

WINSTON B. STEPHENS,
Educational Records Bureau.

Admission to College

AS A VISIBLE turning point in an American youth's educational career, admission to college probably outranks any other event, both in the mind of the candidate and in the popular estimate, to which he is not immune. It puts the seal of seriousness on his cultural aspirations, or at least fixes the social atmosphere in which he hopes to move. Graduation, advanced degrees, practice of the learned professions —all lie in a straight path beyond this parting of the ways. The best that inspires a thoughtful child's personal dream, or the desires of parents who are ambitious for him in a social or intellectual direction, are bound up with "getting into college."

It is small wonder, therefore, that for the realistic American this notion and the various activities connected with it have assumed a concentrated importance out of all proportion to their intrinsic worth in a rational scheme of education. For pupils of a calculating disposition, or who think they understand the "game," the preparatory course is attended by a prolonged and clever balancing of one institution or combination of subjects against another in order to devise the most favorable terms of admission. Under recent conditions, when admission was at a premium and several colleges must be kept in reserve, the game was not unworthy of accomplished wits. On the other hand, pupils whose temperament leads them to substitute worry for objective planning spend the later years of their secondary course in a chill fog of apprehension. The "college boards" are specters, the grimness of which to a novice in examinations is unrelieved. The idea that tests such as these may possess a significance closely related to his personal education rarely dawns upon the candidate. He views them simply as a weird and unpredictable price he has to pay to attain his end—"getting into college."

I. THE EDUCATIONAL STATUS OF ADMISSION PROCEDURE

In this exaggerated emphasis on the overt act of admission, the educational values that should invariably be uppermost in a pupil's mind inevitably recede in importance before the pressure of admission technique. It is possible that college committees in charge of entrance requirements possess and act upon some philosophy of education. Their stipulations, however, govern a highly composite situation. Whatever the philosophy may be, it cannot be effectively applied. The individual and his unique educational make-up, instead of constituting the focus of attention in shaping for him a suitable and continuous personal program from below upwards, are lost in a maze of fixed option-patterns mechanically handed down from above, with innumerable internal weightings that invite the manipulation which now ensues.

The evil is intensified because of the absence of clearly defined and appropriate curricular goals with which the college can appeal to the approaching student and arouse his early interest in his own specific education. These goals do not usually develop in college until the sophomore or junior year. Consequently, the college says: "Get in first; we will then decide what you ought to do." This attitude reacts inevitably on the preparation. It is not a question of arousing or advancing a concrete and alluring intellectual purpose. The sole object of the pupil is to "get in," and that of the school is to "get him in," to the exclusion of any emphatic and engrossing educational idea. Each activity is measured mainly by its effect in surmounting this artificial barrier rather than in laying a solid foundation of knowledge consistent with an educational purpose, already clearly understood, in which the college is to supplement the school.

Circumstances conspire, therefore, from both sides to magnify the mere change from one institution to another with no counterpart in the educational experience which is in progress. After prolonged and violent effort to be admitted, the freshman finds himself engaged in exactly the same work as before. He is committed to no new purpose and follows no new procedure. His altered surroundings interest and impose upon him, but otherwise he might as well be enjoying a promotion from one year to another in the school from which he came. Proof of his genuine admission to college comes much later.

For what the college needs to have demonstrated in a candidate fit for graduation is only faintly revealed by a student's ability to make acceptable "marks" in freshman subjects, let alone his power to satisfy the formula that admits him to those subjects. Many a "teacher-wise" student, whose legitimate draft on the institution is at most a one- or two-year "finishing" experience, is a past master of the ritual of marks, while others whose minds have carved an original course and who feel cramped in any set frame of admission requirements are often potential scholars and professional students of great promise. For both of these, "admission to college" is a sort of spasm, ill-timed and needless. It greatly disturbs the preceding years, but is meaningless educationally and answers no fundamental questions. It is a concession to institutionalism—important to the prestige of a pedigreed Alma Mater, but wasteful and misleading for the student.

The successful adjustment of American educational relations demands a sharp deflation of this swollen and unwholesome concern with mere admission to college. In order to appreciate the problem, our present practice should be kept clearly in mind.

II. PRESENT PRACTICE IN ADMITTING STUDENTS TO COLLEGE

The prevailing methods of transfer from secondary school to college are two: examination and certification based on the school record. The latter plan is followed in more than 90 per cent of American college admissions; but the examination is characteristic of so important a group of the oldest and most reputable institutions in the country that it weighs heavily in any discussion of the matter. It is needless to say that both methods have advantages. Indeed, no satisfactory solution of the admissions problem can easily be conceived that does not do full justice to each of the two principles which the divergent emphasis in our twofold practice has thus far thrown into apparent opposition.

A. *Certification.* Admission to college by certificate usually involves much more than a mere voucher on the part of the school's chief officer that a given pupil is prepared for college. Both to protect the certifying officer and to give objective meaning to his guarantee, the school record of the pupil is put in evidence, and to give the record an objectively selective character a "certificate standard" is set up that requires the attainment of certain ratings in each subject before a certificate will be granted.

Here we have an attempt to apply an altogether sound principle. It is recognized that a person's education is a gradual and complicated process displaying both trustworthy constants and fluctuating variables, and that these can be fairly determined only after long acquaintance and a cumulative appraisal. The only suitable evidence, therefore, for the college to consider in projecting the education of this person beyond the limits of the school is the evidence of this deliberate acquaintance and appraisal.

Were the curriculum, the instruction, and the estimates of achievement underlying such a testimonial all that they appear to be on paper, the problem might well be considered solved. A brief inspection, however, reveals at once the weakness of an extremely plausible theory, and gives the college ample ground for setting up its own examination system to validate the equivocal recommendations of the schools. The weaknesses here referred to are of course familiar, but, in view of later proposals, they should be briefly considered. They are chiefly two.

Certification and the curriculum. By far the most serious defect is the present unintegrated secondary curriculum and its disorganizing effect on the mental equipment that the school is professing to build up within the pupil. The examining college, although it has done its own intellectual business in exactly the same manner, except in a few cases, and these very recent, has preferred to start, at least, with minds trained in a different fashion. Of what value, for the purposes of active thinking in college, is a course in biology or chemistry or ancient history laid down years before in high school and never revived or carried forward in any subsequent intellectual connection? Out of deference to administrative convenience in handling a vast population, the high school has made the colossal concession of breaking off a pupil's contact with ideas immediately after he has seen them merely displayed for the first time, and before any true assimilation or education in their active use can have taken place. It means little to be assured as to what formal areas the pupil may have "covered" in this introductory and survey fashion; it means everything to know what ideas or sequences of knowledge he feels to be his own as the result of matured familiarity, and is disposed voluntarily to refresh and extend.

Hence, when we are offered a pupil's record, even of A's or B's, in a series of scattered and hermetically sealed courses that can have presented but a minimum of inducement to genuine thinking, apart from teacher, text, and credit, we are almost as much in the dark as to the quality of that pupil's present working outfit as we were before. We know too well that, up to the point to which education has been carried under such circumstances, A's and B's can be acquired by minds with no lasting affinity whatever for the real values of the knowledge that has been surveyed. We may be dealing merely with good, willing conformists, working vigorously for the prestige with school and home which is easy for them to win and which they have been permitted to substitute for an intellectual purpose. The school certainly makes no demands that such motives cannot amply satisfy.

Ratings in certification. The second point of weakness is one that still further vitiates the confidence already undermined by a dispersed and static curriculum. It is the purely subjective character of all the judgments expressed on the record. Not only do we have the pupil measured solely on his reactions between the beginning and end of short, disconnected courses in new stuff, but the measure is taken privately and arbitrarily by the teacher of a relatively small group who rates his pupils on the way he thinks they have responded to tasks that he has himself chosen and administered. Knowledge of the subject, experience with pupils, opportunity to judge, health, personal likes and dislikes, school promotion policies —all count as concealed variables in his verdict. Local standards of school work, levels of pupil mentality or background, and relations with higher institutions likewise sharply affect the gradings. Our first experience in testing high school seniors in Pennsylvania brought out the fact that in some large city schools operating under apparently normal conditions, groups of pupils individually rated D in English by their teachers would secure higher average scores in a standard English test than groups individually rated A in other schools. We found one case where the average of all the C pupils was above that of all the A pupils in the same school, due to the simple reason that, after sectioning the class on the basis of tested ability, the principal had entrusted the clever sections to a young and discriminating teacher who rarely gave A's and the other group to a sympathetic veteran who always "marked on effort" and therefore rarely gave any other grade.

Ranking pupils in a large group according to their relative position on a general index to which all subject ratings contribute, tends to even up the vagaries of individual marks, but is still subject to wide fluctuation between groups. A case was recently reported to us where a young girl who led her class at a private school had been accepted, while still a junior, by a prominent eastern college because of this high rank. For her senior year she changed to a school that had made a systematic, qualitative selection of its pupils and had based its classification entirely on frequent objective testings. Here, instead of leading, she ranked exactly in the middle of the senior class, and, as a result, had her prospective admission cancelled by the college.

It has been pointed out that subjective ratings on the whole are less damaging than the present curriculum. Clearly, if the latter were corrected, the value of these personal opinions could scarcely fail to improve. The shift to a dynamic, cumulative curriculum, with ideas expanding because of natural growth around four or five constant centers of reference, would require and would develop superior teachers. Furthermore, even subjective judgments, when directed at a pupil's *present grasp* of an entire field and its relationships, which he has studied over a long period, would probably furnish more trustworthy measures of his true achievement than an average of the same sort of judgments of his work, taken morsel by morsel, as now, just before the pupil drops each piece into oblivion. It is because the curriculum itself facilitates the process that the European teacher, in spite of his subjective judgments, arrives at a truer estimate of his product than it is possible to obtain in most American schools. His rating is not a composite of forty judgments of what may once have occupied a mind but has in large part changed or disappeared; it is a considered analysis of what the pupil before him now is as a result of all the influences, both in and out of school, to which he has been subjected.

B. *Admission by Examination.* The demand for an approximate answer to this last, all-important question as to what the pupil actually brings with him, has impelled many of our leading higher institutions to hold fast to their system of entrance examinations which constitute the alternative to admission by certificate. Here again one recognizes the attempt to apply one of the soundest principles of learning. An individual's education can proceed successfully only by taking as the point of departure the mental entity that he has actually become as the result of previous mental activity. The number of years that he has studied, the schools that he has attended, the applause that he may have enjoyed, are all quite irrelevant compared with the actual state of his mind as related to his proposed activity in college. The mere ticking off of the units in a curriculum affords no assurance that a mind has generated important thoughts of its own or has the means wherewith to do so. "What do these school marks signify?" exclaims the college, and rightly. "Let us see the boy perform for himself. We will draw our own conclusions."

Were adequate diagnosis by examination as simple as this alternative implies, and were its complications less often confused with impressions of uncertainty and inconsistencies on the part of the higher institution, as to what its own aims and consequent "requirements" should be, this solution would appeal far more widely than it does at present. Under existing circumstances, its best feature is its directness and flexibility; knowledge from any source counts, and whether it be acquired in a week or a year, at school, or in private study, is unimportant beside the demonstration that the power is there ready to use.

Inference from the single examination. The chief indictment against the single examination for admission to college is one that has been rapidly emerging and gaining in force during the past two decades, as we have become increasingly aware of the subtle and complex character of mental growth. We are sure today that a mere "snapshot" judgment such as a final secondary examination affords, even assuming the best obtainable technique, is most frequently a distorted and badly weighted index to a pupil's normal achievement and power. The examination is upheld in principle, as an appropriate intellectual test by which pupils should be stimulated. Excellent; it is agreed that pupils should be trained to welcome precisely such exacting intellectual effort. But instead of evaluating the specific outcome objectively as the partial and often ambiguous thing it is, we proceed boldly to infer from the results of a single examination all sorts of abilities or disabilities which a highly charged experience such as this is certain, not to reveal, but to disguise.[1] Boys may be ranked legitimately enough on their ability to make a single brilliant and gracious appearance on a ballroom floor, but if girls proceed to choose their husbands solely on the basis of such judgments, there are bound to be serious miscalculations. The power to make a pleasing single showing, with one's college career at stake, is a combination of knowledge, health and temperament, cleverness, and good luck—four elements that may fall into a wholly different combination at another time, and that almost surely present other relations when considered over the pupil's entire span of secondary education. Knowledge particularly, the essential factor of these four which it is desired to isolate, is subject to enormous fluctuation between the momentary maximum achievable by intense concentration for purposes of final examination, and the normal, unforced level of retention and use which is the sole true index of fitness to continue, not only in given fields, but in intellectual pursuits at all. This effect alone, this premium, from factitious motives, on the conscious filling of the reservoir in order on a given date to produce the highest possible pressure of a peculiar and limited sort, while in itself the measure of an interesting trait, or *capacity*, of the candidate, ought to make the college wary of tempting inferences that may be totally false.

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[1] It was long a practice of the College Entrance Examination Board to have its readers explain and comment on their ratings as indicating promise or lack of it in the pupil. This procedure has recently been discontinued because of the embarrassing absence of correlation between those comments and the eventual outcome, as well as between the comments of different readers on the same candidate.

The examination is likewise open to attack on technical grounds. As hitherto conducted in this country, it has been almost exclusively a subjective examination, that is, a few arbitrarily chosen questions with answers rated in terms of personal opinion by individuals of varying experience and competence. Broadly speaking, however, this chapter of our administrative effort has been watched with a more critical scrutiny and, within its limits, has been attended by greater success than any other. The colleges admitting by examination early saw the advantage of pooling their operations and developing a uniform procedure. Under the guidance of the College Entrance Examination Board the preparation of examinations has been conducted with great care and the reading of the papers has been reduced as nearly as seems humanly possible to a flawless formula. There is good reason to believe that this organization is the most highly developed and its procedure, of its type, the most rationally defensible, of any examination agency in the world.

It is because of this notable achievement of the Board in pushing the discursive written examination to the extreme limit of its technical possibilities that the inevitable shortcomings of this type of test have been clearly disclosed. It is not a question of bringing the technique of such examinations everywhere up to the Board's high standard. The defects are inherent. The same error of sampling in compiling the questions and the unavoidable variability in interpreting the answers are everywhere evident even under the best conditions. For some years, therefore, the Board has experimented fruitfully with the "new-type" principle in the Scholastic Aptitude Test, and is now extending the plan to a group of "validating" tests in English, mathematics, and foreign language. All this has been a sound and gratifying evolution for which the colleges, through efficient organization, are responsible.

III. A SOLUTION BY SYNTHESIS

Scanning the problem as a whole, with due regard to the strength and weakness of present practices, it requires no undue optimism or ingenuity to discern already the elements of a solution that is in no sense a mere compromise but rather a straightforward synthesis of the valid contentions of each party. We propose, therefore, to outline the main features of such a solution as they are suggested by the Foundation's experience in its study of the relations of secondary and higher education now drawing to a close in Pennsylvania. What are the principles on which a satisfactory and trustworthy transfer from school to college can be effectuated, and how can they be applied?

A. *A fundamental postulate.* Before we attempt to examine these suggestions, there is a postulate fundamental to the whole proposal that should first be laid down. On this postulate the greatest emphasis should be placed, if we hope really to draw the fever from the college entrance situation as it stands at present, and to ensure an alternative procedure possessing a true educational character. We shall never arrive anywhere in this matter until we get rid of the prevalent notion that the college is father to the educated man. Owing to an almost infinitely devious and varied secondary experience of college men and women in the United States, their true intellectual parentage has been scandalously difficult to trace. It has been tacitly agreed, therefore, to consider them a special generation, miraculously produced without ancestry and owing every important mental gift to the gracious endowment of the college. Such at least seems to be the active assumption of most college officers.

It is this lineage that requires redrafting. It is still true, as in every other aspect of nature, that the child, and not the college, is father to the man, whether educated or otherwise, and that a rational education can be built only on a profound understanding of what the child is and what he requires. If our most studied school processes are so haphazard and so shallow; if our results are so fickle of interpretation as to make legitimate any sort of culminating scramble whereby a youth can be dragged, or can drag himself, up over the college defenses, then our efforts may as well be abandoned. The verdict of competent schooling the world over is opposed to this, and gives us the right to assume that the twelve school years, and particularly the six high school years, constitute a period in which, with any child, a comprehensive and searching analysis can be made, the result of which, within reasonable limits and with rare exceptions, will go straight to the mark and will prove consistent with subsequent events. When such analysis exists, it is on this, and on this alone, that the college can successfully base its dealing with a student; to ignore it is plain unreason.

We take for granted, then, that the school is the nursery in which the future college student, like the future stenographer, mechanic, or salesman, must be grown and studied; that under suitable conditions and with competent scrutiny the genuine student announces himself at once and unerringly; and that our task is to ensure that his subsequent learning and training flow naturally and with certainty out of this indisputable, and essentially determining, period of his growth.

B. *A true educational record.* With such a premise it follows, as the night the day, that a true chart and record of the pupil's school activities is second in importance only to the activities themselves, and becomes the chief reliance of any admissions procedure that is based on defensible educational grounds. Here we have, then, the main contention of the certificating group frankly and fully acknowledged, even beyond their claims. For it is not only, not even primarily, as a defensive document, merely to prove the candidate's right to be in college at all, that such a record is proposed. Its chief function is to serve as an objective guide to specific activities, to show over as wide a range as possible the sort of ideas with which the pupil is most successful, the kind of thinking that commands his personal momentum and initiative, the skills in which he is poor as well as those in which he is conspicuous. All this comes into play not merely to "get the pupil in," but primarily to determine what sort of college, if any, what phase of further study, what vocational or avocational ends, may wisely be proposed and advised. And the record, if understood, immediately becomes of quite as much importance to the college as to the school itself. It is their joint agreement on its interpretation and the appropriateness of the particular offering the college has to present, *in view of the record*, that justify it as an educational instrument.

C. *Pupil analysis in terms of "present worth."* The second feature of an adequate admissions procedure must, we believe, be that of cumulative analysis, or what might be termed the principle of *"present worth"* in the pupil. By this is meant an epitome or summary, as complete as possible, of the pupil's intellectual, emotional, and physical equipment and competence at a given moment, including his entire past and unlimited by his particular activities. To an almost incredible extent American secondary institutions are dominated by the naive view of education as a state that arises automatically solely from having "taken" a great variety of short courses for each of which one has received a credit. No other country tolerates the conception in this crude form, nor does the American himself permit it in any other aspect of his life save in politics and in prisons where "serving time" is normally equivalent to a promotion that is dangerously analogous, and where not even conspicuously bad behavior is adequate cause for expulsion. To be pointed in the right direction, education at any level and for any purpose must discard this absurd assumption and apply the universal lesson of common sense: education is concerned with what one is, knows, or can do, and when the material of education fails or ceases partly or wholly to function in one's mind or conduct, to that degree one fails or ceases to be educated.

The notion underlying the college's demand for an actual cross-section of the pupil's mind, as revealed in examination, is the discovery of the college that tangible and measurable intellectual possessions are indispensable for attaining the higher values of education. Knowledge is not wisdom, but it is the source of wisdom, as well as the catalyst in whose presence the ability and disposition to become wise most surely accrue. The defect of the present college examination procedure in this regard has already been pointed out; it has had to be satisfied with a final cross-section only, one for which violent and distorting preparations are made, resulting in a picture that leaves many important things about the candidate unsaid, and in which most of the things that are said are, to some degree, wrong.

The remedy for this is obvious. It is, namely, to push our demand and inspection for "present worth" back to the beginning of formal education and incorporate it as an educational attitude throughout our entire practice. What we need, in order to guide these children, is a series of truthful pictures, in as close succession as possible, that will reveal the normal, unforced, and significant action and tendency of their minds and which, in its totality, will admit of but one interpretation. Without the pressure and extraneous incentive incident to the present final examination, we should ascertain, step by step, what sort of ideas pupils welcome, assimilate, and grow on, and how these are related to the enormous reservoir of knowledge that is available. Little by little, the pupil as well as the teacher would acquire the salutary attitude that it is what one becomes, what one really knows, and what one can surely do that count in education, and nothing else whatever. Anything at this level of development that has the effect of substituting an outward sign or value for the grace of permanent inward change and gain, as is notoriously true of high school "credits," should arouse the implacable aversion of every teacher.

With such an attitude toward the pupil and his work, the entire secondary course would itself become a systematic and critical study of the individual, and, years before the actual transfer took place, his record would disclose far more about his fitness for college than any entrance examinations now reveal. He would come eventually to the college, not as a problem in admission—a matter already settled long before—but solely as a problem in placement, both in kind of work and in degree of advancement, and even these points might well have been settled earlier, on the basis of knowledge, secured and made available by his school, as to his true intellectual status.

The attempt, by means of an extended and adequate record, to show the gradual development of a pupil's *"present worth"* would have a far-reaching effect even with such a curriculum as that to which most of them now submit. It is fortunately impossible to destroy the continuity in the teaching of certain subjects, while of course all normal minds seek continuity in their free activities, and the more capable they are, the more do they impose that principle habitually on all they do. The proposal to ignore the convenient stratification of learning that has become familiar, to stop judging pupils by what they seem to know of material just studied, and to recognize rather at each comprehensive probe, from term to term, simply what we find and *all* that we find, would at once set up a healthy ferment in any curriculum. Should a pupil normally display growth from one semester to the next in command of his knowledge of science as a whole, even though he may be studying but one branch of science? Ought knowledge in the entire field of history and social studies to stand still, or go back, simply because the pupil happens to be earning his "points" in some other department? Is it good sense to pass over without recognition all the extra-school experiences of a pupil where independent thinking can most easily be stimulated? Traditional attitudes on these matters receive a powerful jolt the moment we give a pupil, by means of interesting and cumulative tests, often repeated, the slightest reason to put genuine and increasing purpose into both school and private study, or to resurrect and discover new meanings and fresh applications in ideas that he had supposed, being "credited," were therefore dead.

Combining the two main features that we have proposed as necessary in any plan for determining successfully a pupil's fitness to enter college, we arrive at the following result. Briefly put, what we are after is a true inventory, progressively maintained, of a pupil's mental equipment in terms of a cumulative series of measures that shall give us at each point, regardless of what he may have had or when he may have had it, an accurate index of the levels and scope of his normal working knowledge.

IV. THE PROGRESSIVE INVENTORY

Certain intrinsic peculiarities in the construction and use of the sort of record, or progressive inventory, that has been described, are of such importance as to deserve further consideration.

A. *Objective measures in a useful record.* While an absolutely "truthful" record of mental ability and achievement may still be far to seek, it is already possible, we believe, to approximate the truth in certain important respects. To this end the all-inclusive, and therefore ambiguous, blanket-ratings of familiar academic practice should be split up, and the subjective, personal variable that they contain eliminated, wherever possible. With respect to fundamental knowledge and the important primary judgments in most fields of school and early college learning, this can now be done by means of tests that give relatively constant and unambiguous scores and that so completely cover a field in all details as to resemble gauges on a reservoir. Especially since the advent of the Cooperative Test Service made possible by the General Education Board, these tests are now easily available. They should be applied in great variety, the primary intention being, not to establish a fixed standard of achievement, but to provide a series of measures, each with a trustworthy standard of its own, that shall enable us to find out accurately where a pupil's ideas lie and what they are. The social or educational value of certain knowledge may be open to question, but that fact makes it all the more desirable to possess an adequate measure for it. It may presently be discovered that much information declared to be useless for education is not retained except in minute quantities.

It is to the gradual increase in tests of this nature and to their steady improvement that we owe the possibility of developing a record susceptible of an increasingly constant and uniform interpretation, and it is for this reason that, in describing the main features of a pupil's record, the chief emphasis has been placed on knowledge. Thus far, it is our measures of knowledge that have given us the most stable and significant objective data for school purposes. To know that the son of a Kentucky mountaineer, under the tutelage of some humble and remote instructor, achieves a Latin score fifty points above the average for Columbia freshmen gives us an altogether different impression regarding this student from knowing that his teacher marks him A. The first is information on which the Columbia Latin department can act with confidence without seeing the candidate; so far as a knowledge of Latin is concerned, it turns uncertain attainment into a definite coinage. With such unvarying and comparable scores in tests of known scope and difficulty, growth can be accurately watched from year to year, while individual performance can be analyzed and balanced in a manner heretofore quite impossible. John is relatively low in history and science. Some one says he is good in art. How good? Unless there is an expert at hand or some device to determine the nature of John's abilities in art, a potential genius may pass through and leave the school under the false label of mediocrity or worse. By these means, too, the pupil himself can be freed at last from one of the haunting bugbears of pupil-teacher relations; namely, his suspicion of bias or of favoritism or even of ignorance on the part of his instructor. Indeed, nothing can so quickly and so surely relieve education of its unwholesome teacher-tyranny, or ensure its prompt response to those who seek it sincerely, whether with guidance or alone.

B. *Subjective judgments indispensable.* As a result of enthusiasm for objective measures and relief at being freed from responsibility for judgments without knowledge, many instructors have leaped to the conclusion that, while their function as teacher has been freed and enhanced, their authority as critic has disappeared. The situation is not so simple as this.

It is apparent to every thoughtful friend of recent effort for exact measurement in education, that the movement is in its infancy. The tests that we possess need much further refinement and study as to just what traits they definitely disclose; and there are many traits that we can crudely describe for which we have as yet no measures that are even approximately objective. Consequently, at every stage in this development, subjective criticism must stand its ground, and recede in favor of more exact procedure only when a point is fairly won.

Furthermore, it seems inevitable that for a long time to come, if not permanently, many of the finer human characteristics and distinctions that crop out in the course of education can be identified only through the agreement of subjective report. The underlying objective measures that are available make these opinions more pertinent and convincing but cannot alone tell the whole story. Thus we may insist that the educational fisherman accurately measure, weigh, and classify his fish, leaving nothing to the imagination; but its gameness, its style, its fighting qualities, its endurance we learn, and learn truly, from repeated personal contact. These are features that are often of greater import than exact size and weight, but the angler keeps closer to the truth when he has committed himself to a measured muscallonge than when free to leave the impression that he has caught a whale.

It is essential, therefore, that, in the proposed record, ample provision be made for report by the teacher of those aspects of a pupil's personality and performance in regard to which he has opportunity and is qualified to judge. Intellectual virtues, vices, peculiarities, and tendencies, emotional qualities that influence mental and social success, physical prowess or handicap—all are important, but in order to make clear just how important they are, they must be stated in terms of specific behavior and must not carry weight beyond the evidence.

Perhaps the most important single disclosure of the tests given in the course of the Pennsylvania Study was the number of minds of all ages capable of consistently brilliant scores in comprehensive tests, which their institutions were willing to brand with undiscriminating failure or low ratings. Traced to its cause, this practice is found to be due most frequently to the so-called "attitude" of the student; i.e., inattention to local regulation and teacher's assignment, regardless of the fact that in many cases the conformity of the student would have involved him in useless and tedious repetition of what he already knew. Without arguing the merits of such assignments, it seems clear that the questions of knowledge and of conformity should at least be kept distinct. It is important in estimating a pupil, as well frequently as in estimating his teacher, to know that he avoids classes, and ignores his assignments or does them half-heartedly. It is both unjust and stupid, however, to allow that fact to determine the rating of his actual knowledge which, in the judgment of many, is the important factor. Both deserve full recognition on a true record, but each solely for what it is.

C. *Educational perspective and the valid record.* A third and final consideration has to do less with the technique of an effective record than with certain underlying ideas that should guide its development and use. It is here that the artificiality and distorted emphasis of modern college entrance requirements become most evident.

Let us assume, for example, such a procedure as has been suggested, worked out in detail and successfully inaugurated, with the intelligent cooperation of the faculty, in a modern private or public secondary school. Instantly, the admission stipulations of the best colleges served by the school fill the horizon as governing the program of tests to be given or the special qualities to be watched for in certain promising pupils. But we have already seen that the college rarely or never defines its goals for the choice of students at the time of their admission or before. The first year or so is avowedly occupied in a sorting and sifting process, wherein the secondary record plays an ignominious role, although what is purely secondary work goes on as before but under the college label. In the school, therefore, any expert and revealing study of the pupil, begun, say, with the sixth or seventh grade, finds its curve extinguished after the twelfth grade, in a group of final arbitrary demands behind which lies merely the groping of the college for a generalized and nebulous academic excellence. These are no conditions under which to develop a discriminating pupil analysis or to encourage serious guidance at the time when it is most feasible and necessary.

According to the view here maintained, the perspective appropriate to the secondary school is the entire span of the pupil's intrinsic education, not an arbitrary path to the college gate—a path to which the pupil is more or less forcibly adjusted and which disappears entirely after he enters. If the educational process is at any time to center in the pupil rather than in the institution, it must do so here, and if it is to do so with effect, the lines discernible in a young pupil's interests and powers must radiate directly to possible ultimate satisfactions that are genuine and not be deflected midway by an interruption like "getting into college"—an interruption that stimulates many alien interests and that fails to coordinate and clarify his thinking along the main line.

The more completely we concentrate on the pupil and the more precisely we learn his real abilities and powers, the more urgent is the need for sharper definition on the part of the college, not of entrance requirements, but of what its own various offerings mean, and what they demand, in order that the essential choices and opportunities open to the pupil may be understood. We need this, of course, not in terms of units or semester hours, but in accurate terms of knowledge, kinds and tendencies of skills, extent and character of minimum limitations.

For example, the school is badly in need of some indication of the minimum of tested knowledge and understanding that can substantially profit by anything a given college has to offer. In the sophomore tests in Pennsylvania, student ability ranged from the extremely brilliant to authentic cases of almost hospital helplessness. Surely many of these blind plodders would have got far more from regular and appropriate manual employment; their concern with intellectual matters is indefensible. Again, if a college, as is now the case at the University of Minnesota, has well-planned courses covering, say, two years with a clear destination of value to good minds that are not scholarly but that desire a wise, practical orientation in a complicated world, the school should be made aware of such an offering in its essential details. It can then plan for such a mind, in cooperation with the college, a curriculum with sequence and coherence straight through to the end.

Schools sending pupils to Harvard or Princeton should have intimate, authoritative knowledge of just what concentration means in the "Division of History, Government, and Economics" or in "History and Literature" or in the "School of Public and International Affairs"—what sort of minds ought to choose these subjects, what background of knowledge is desirable for success, to what sort of activities they lead. Pupils of acute mentality and scholarly promise, for whom the school's analysis proves such fields to be appropriate, deserve to be confronted early with the genuine terms and conditions governing these momentous choices, while the rigmarole of "getting into college" is pushed into the background. We deplore the wasteful "day-to-dayness" with which secondary pupils commonly proceed on their intellectual rounds, and forget that this is not their fault. They can do no other, save when, from their parents or from a casual teacher, they are so fortunate as to catch the enduring vision of what they unwittingly seek, and would at once recognize if it were presented. Obsessed with institutional emphasis, our forms encourage this shortsightedness and will continue to do so, so long as "getting into college" is the theme instead of preparation for whatever, in the college, best suits a long and true view of the pupil's education.

D. *Record, school, and college.* In view of what has been said, it is not difficult to sympathize with the widespread feeling that a great part of the weakness of American secondary education is due to the fact that it is always interrupted in the middle of its job. Wherever, in spite of college requirements, it succeeds in working out a true formula for a child and gets him happily under way, the college steps in with a different set of values and, ignoring the findings of the school, tries to conform him to its plan. It is this clash of two successive authorities, friendly enough but almost wholly ignorant of each other, that in the interests of a harmonious and consistent education should, at all costs, be reconciled.

As a step in this direction the creation of a comprehensive cumulative record that both parties can understand and that both can trust is of first importance. Let us assume, as before, but without the complication of existing college requirements, that a school has brought to completion for its senior class such a record-analysis of its achievement as we have been discussing. On this record-analysis, ranging over the entire field of organized knowledge, we find, for a given pupil, many subjects with negligible score or none at all, a few with average, or better than average, index, and a small group—physics, chemistry and biology—in which the pupil consistently shows outstanding ability as compared with thousands of his age and history elsewhere. All this is "present worth" and can be confirmed at will. In addition to these knowledge tests the record bears, year by year, not ratings, but concrete observations of the teachers—the *same* teachers who follow through, and who define the pupil's behavior in successive situations and with different kinds of academic material.

After this pupil's science was well started in school, he became fascinated with the relations between chemistry and biology, and was at once pointed to the field of bio-chemistry and to the colleges where such work was well done. As he proceeded, both his abilities and his interests held him strongly to this course, with the result that the first college to which he applied accepted him in his junior high school year on his record, and laid out with him, in cooperation with the school, the school and college work intervening through to his final general examination in that field. More than a year, therefore, before he left the school, this pupil had been enabled to discover and select out of many, the one educational destination that perfectly suited him.

It is interesting to note the implications of the record as used in this case. Specific admission requirements have virtually disappeared. This boy's curriculum was built up solely by the judgment of the school in view of the powers he showed as his work was studied and tested. The college could read and understand the record of this work *in the same sense* in which the school read and understood it; and it got from the record the normal, undisturbed performance of a candidate in terms that it could compare accurately, not only with others of the same age and grade, but also with the average of its own advanced students. If two units of elementary Latin and a half-unit of ancient history failed to appear, that was the school's lookout in doing for the boy what, in its judgment, was best for his welfare. A decision of that nature better becomes the school as a professional agent than it does the college. The record was offered on its merits and the college wisely lost no time in accepting it.

There is good prospect that so soon as procedure of this sort becomes general, the present relations of school and college can be radically altered for the better. Some institutions that have built up a selective tradition have done so by keeping their admissions list undetermined as long as possible; all candidates are uncertain of their fate until the last moment. By welcoming transfers and late comers to the competition, the college aims to ensure for itself the best possible selection. However effective this may be in the development of a certain type of institutional morale, such a policy is bad educationally both for the pupil and for the school that prepares him. No attitude could more emphatically glorify the mere "getting into college" at the expense of a well-defined, long-cherished intellectual purpose in process of steady and satisfactory fulfillment. It is immensely more important to pave the way for students who, as pupils, have early shown conviction as to what they are about, who consider, plan, and work at their own studies with discriminating feeling for the serious values ahead, both in school and college, rather than to assemble a group who can "get in" brilliantly often for the very reason that they have never been diverted by tenacious intellectual interests that are genuinely their own, and for whom "getting by" is thereafter the natural sequel.

In other words, the school's horizon should be coincident with that of the college just as that of the parent in the earliest years is coincident with both school and college; the successive designers and artificers of a young person's education should be able to work together on the same pattern without essentially disturbing it. A record such as is here contemplated will enable the college to cooperate with the school by accepting provisionally, years in advance, pupils whose minds are already dealing with education rather than with institutions. The eventual transfer from the one institution to the other thus becomes little more than a geographical incident.

E. *Relations of school and university.* It may be added that an instrument of this kind, if properly used, should give us great confidence in dealing satisfactorily with what looks like an approaching twilight-zone between secondary school and university. This one- to two-year period seems destined gradually to be taken over by the secondary school where it undoubtedly belongs, and where unity of treatment will be far simpler than at present. It will be a pity, however, if we insist on handling in any hard and formal fashion, with fixed courses and credits, what might prove a great boon if used to insure long-needed flexibility.

The period shows a tendency to fray out on both edges. Colleges that recognize proved achievement over and above their admission demands are frankly expressing it in advanced standing, thus accepting in practice the implications of a valid theory of fitness. On the further side of the interval, an institution like the University of Chicago gladly forgives any incompleted fraction of the time, if the student is prepared to make good on examination for the senior college. Both public and private preparatory schools may see the time, not far off, when they shall be able, for pupils that are indubitably of university caliber, to lay out and complete a satisfactory preparation through to the true university. This would involve some addition to their staffs but, if properly worked into the earlier years, should require, for such pupils, only a slight increase in time—one year at most. An outcome of this sort would, of course, solve admirably the major problem with which we are here concerned. In such an adventure the record here described would furnish both chart and compass.

F. *Response of the colleges to the proposals of the Pennsylvania Study.* In my remarks last year, I described the arrangement that had been made at three centers in Pennsylvania to segregate pupils who in its tests had shown exceptional academic aptitude, and to introduce certain unusual elements of unity and continuity into their curriculum. It was planned to make both the work and the tests genuinely cumulative, and to ask the colleges to cooperate to the extent of considering (for these pupils only) our record of this work in lieu of examination or other certificate, when selecting the class with which these pupils would enter.

Although only about two-thirds of the one hundred and fifty members of the group expressed their college preference at that time, all colleges admitting only on examination were included, except Wheaton and Haverford. The response from these examining institutions, as well as from the colleges admitting also by certificate, was affirmative, with the exception of Harvard College. In most cases, it was heartily sympathetic. Several desired to make their cooperation coextensive with the experiment, and a number of important institutions that had heard of the plan but happened not to have been named by our small group, volunteered their support. In view of the arduous efforts and the large expense that the experiment has thus far involved it is gratifying to be able to report this significant expression of active interest on the part of the colleges in a serious endeavor to improve school and college relations.

In deference to inquiries repeatedly made by colleges that have at one time or another been the beneficiaries of the Carnegie Foundation or have cooperated with it in the promotion of certain educational standards, it seems appropriate at this time to add a word regarding the Foundation's position touching so important a problem as that now under consideration.

In the early days of the Foundation twenty-five years ago, the most serious question encountered was that of definition. Precisely as today, the answer to the query "what is a college?" was seen to depend in large measure on the student material that went into it. For this reason the Foundation laid great emphasis on the suitable preparation of the students accepted by institutions on its associated list. In the schools whence these students came, the greatest confusion prevailed. There were no accepted units of measurement for work completed. One of the first notable services of the Foundation, not only to its member colleges but to the country at large, was a general conference of the officers of the organization with representatives of the National Conference Committee on Standards of Colleges and Secondary Schools and other well-known educators which resulted in the definition of the somewhat rigid time units, Carnegie units so-called, that have since prevailed in the administration of American secondary education.

All that can be said now about this device is that in its day it represented a distinct advance, and performed an indispensable function in aligning the school forces of the country in what was as near a common understanding as, under the existing circumstances, could then be achieved. None recognizes more clearly than the Foundation that these standards have served their purpose. With changed conditions and better tools such norms become obsolete. They should undoubtedly give place to more flexible, more individual, more exact and revealing standards of performance as rapidly as these may be achieved.

Certainly it behooves the conscientious educational institution of every grade to experiment constantly with procedure that is scientifically calculated to strengthen its processes. The Foundation therefore views the work of such organizations as are here represented with the utmost hopefulness and good will.

W. S. LEARNED,
Carnegie Foundation for the
Advancement of Teaching.

The Guidance Function in the Secondary Schools and Colleges

INTRODUCTION BY DR. W. S. LEARNED

Those of us who have looked over the American scene with solicitude as to the chances of introducing procedures that would make education not only universal but truly education, have been appalled at times at the difficulties confronted by the state universities. Tied up as they are with politics, on which their daily bread depends, it is usually necessary for them to convince the legislature and often the people of the state as a whole before novel departures can be introduced, and when those departures involve what is mistakenly thought to be undemocratic discrimination among students, the case sometimes seems hopeless. It was not until I discovered what was going on at the University of Minnesota that I realized the possibility of a different outcome. A book published about two years ago, entitled *The Liberal College in Changing Society,* came as a dazzling ray of light to reveal both what could be accomplished in an organization of that kind, and also the feasibility of winning over the public opinion of a great commonwealth to such a program. The author of that book, and the moving spirit in much that has taken place at the University of Minnesota, is Dean Johnston, who will speak to us now in regard to the problems of school and college guidance.

ADDRESS BY DEAN JOHNSTON

MODERN universities are conscious of a long tradition and of a commanding position in intellectual affairs. This long-sustained position makes for conservatism and a sense of satisfaction in the university personnel. From this secure position their faculties may observe and interpret changes in other social institutions. Within the lifetime of existing universities, changes enough have taken place.

In the political sphere down to one hundred and fifty years ago, monarchies were the rule. Since then, nation after nation has changed to democracy of some degree, and now these democracies are shifting to communism, fascism, dictatorships, and possibly to monarchies again. In the economic field, men do not know today whether or how long the capitalist system is to endure. The religious system which had cradled the western world through the dark ages in the folds of its monks' robes, and had given the lusty youth the records of ancient learning, found itself split asunder and shorn of its authority as the ancient learning blossomed into modern science and now is all but abandoned by the giant "western civilization" playing with his powerful and delicate machines, in full command of the world from the ocean depths to the stratosphere. All this long since the founding of the universities of Oxford and Paris and a score of others. And to us of the present day it is evident that the rate of change has been vastly accelerated. From the dawn of human intelligence down to 1870, man had learned to use fire, and his inventive genius had produced tools of stone and metal, the lever, the inclined plane, the screw, the wheel, the arch, gunpowder, the art of printing, optical instruments, windmills, steam power, photography, railroads, and the telegraph. Within the lifetime of men not yet old have been produced a greatly disproportionate part of the instruments of modern civilization: the gas engine, the automobile and air navigation; the telephone, electric light and power, and a vast number of electrical devices; bacteriology and modern medicine; the creations of synthetic chemistry; the phonograph; moving pictures, many applications of radio-activity, television, etc. In a world of accelerating change, what advice shall the hoary university give from its store of wisdom?

No social institution is assured of permanence. The only thing certain in society is science and the scientific study of human institutions; that is, the careful and critical examination of the grounds for any institution and its continuation, modification or replacement in accordance with the soundest judgment available at the time. Sometimes the intuitions or emotions of the mob outrun judgment, and sometimes the best judgment is rejected by the powers that be and is taken up by the mob. In any case, the course of civilization finally follows human judgment based on experience or on careful, critical, and experimental study.

Society has maintained the most permanent of its institutions for just this purpose, to formulate judgments and to ensure their soundness. This institution has existed in some form from primitive tribal life onward. In modern times it is called the educational system. Its purpose is to train the youth to do the things and to act in the ways which the elders have found necessary for social safety and welfare. The tendency has been for those in power to interpret this as a mandate to train the youth to follow the footsteps of the elders. Educational institutions have consequently been expected to defend and maintain all established social institutions and customs which are regarded as "good." This has led to disappointments. Although the universities were loyal to the monarchical régime, they could not defend it in France, Russia, Germany or elsewhere. The problem for the universities and the educated classes is to have sound judgment ready in the fulness of time so that periods of waste, confusion, or chaos may be avoided. Did the universities maintain effective intellectual leadership in France, Russia, or Germany when changes were necessary? If the universities had led social evolution, need those countries have resorted to revolution?

The conservative tendencies of the universities are most marked within their own intellectual sphere, and the customs which they maintain within their own walls are the last to be subject to social influences. Witness the subjects of study, sequence of studies, vested interests of departments, lectures, textbooks, lesson-learning, forms of examinations, robes and ritual. Albeit in some of these the universities are maintaining stumbling blocks to progress in society.

The present discontent and agitation for reforms in education are due to a fundamental error in the assumption that the educational system should be wholly or principally conservative. What the elders of greatest wisdom know to be necessary for the safety and welfare of society includes the introduction at frequent intervals of changes in institutions to adapt them to new conditions. The wise direction of the course of society results from training its members to examine critically existing institutions in the interest of the whole society and to search diligently and profoundly for the necessary adaptive changes. The demonstration that distinguished service in this field can be rendered only by a limited number of persons having special abilities is a separate story. This being true, however, it is the imperative duty of the educational system to search constantly for those individuals who possess these qualities or abilities and to train them for the parts which they will play. The only way both for the discovery and the training of these individuals is to examine and analyze the abilities or skills which each pupil manifests from time to time, and to help each individual to develop to the highest efficiency his inborn skills and traits. This end may be defeated by elevating the teaching function above the developing or training function. To require each pupil to learn certain subjects of study and to envelop the school in an exclusive atmosphere of lesson-learning may be the very means of covering up and hiding the most valuable qualities in a given individual and of blocking the drives which would enable him to render conspicuous services. But in so far as the procedures of the school lead to the full development of the native qualities of an individual, he will be ready to render such service as he can for the adaptation of social institutions in response to changes appearing in the environment and in man himself.

This I conceive to be the fundamental philosophy of higher education. Mankind and each national society are ever changing under the necessity of adjusting themselves to a changing world. Universities have endured long because their learning and their investigations have put in the hands of men the means of adapting their social organization to its changing conditions. Education can perform this function best by giving to each individual the best possible facilities for the development of his powers and by surrounding him with an atmosphere the most favorable to the development of social appreciation and responsibility. Toward the attaining of these ends, guidance is a critical function in which the efforts of the individual and the judgment of the school unite.

In a conference such as this it may be helpful to try to state some of the things which should be done by an educational system which recognizes that its functions include active efforts to forward and direct social evolution as well as to conserve those human goods or satisfactions which have already been attained.

1. The school should give each pupil an experience as rich as possible in contacts with both the natural and the human and social elements in his environment. Richness of experience means a wide range of activities and social relationships limited only by availability and by considerations of the health of the child. (In providing a rich experience, of course, we must not overwork the child, exhaust his energies or fray out his nerves.) Richness of experience is necessary to draw out inborn traits or abilities which otherwise might remain dormant. Life among persons of ultraconservative or bigoted natures, with the consequent limitation of contacts with both nature and man, is one of the greatest misfortunes which can befall a child. Incidentally, this circumstance robs society of the characteristic service which that child might offer. Richness of experience in the case of children of brilliant endowments is immeasurably more valuable than forging ahead in narrow academic studies. Richness of experience is necessary before academic advancement has proceeded so far as to determine further trends to the exclusion of native tendencies. Experience and studies must be balanced in the light of the rate of maturing of the personality in order to conserve interest, direction, and drive.

This principle, whether consciously recognized by teachers or not, is already at work in our schools. Indications of it are found in the recognition of play and of freedom of action in the schoolroom, in the project method, in excursions for observation, in school gardens, and in the movement toward liberal curricula in the secondary schools. Some of these things are to be discussed in this conference.

2. The recognition of individuality. Instead of extended discussion, let us only mention some of the considerations to which the school needs to give attention in planning for individual development.

(*a*) Individual differences. I plead here for an actual and effective recognition of differences in ability; a recognition that will effect changes in curricula, that will develop advising systems, that will make facilities available in proportion to the individual's capacity to use them, that will open gates and smooth pathways for those who can and will go forward, that will acknowledge and reward achievement by individual effort without respect to time, place, or circumstances.

(*b*) Combinations of qualities or skills which make for efficiency in particular vocations, social situations or duties.

(*c*) Interests and drives whether appearing early or late. I understand "drive" to be that intangible something which leads the individual to throw his weight in the direction of his interest.

(*d*) Energy, physical force, will power, determination, application, concentration, etc. These determine how far the individual will go.

(*e*) That undefined tang or flavor which added to the analyzable elements goes in greater or lesser degree to make up what we call personality.

This recognition of individuality is essential to the performance by the educational system of its function to encourage and direct adaptive change in society. The conservative attitude expresses itself in the effort to make all people alike. There is an urge of primitive man to require each member of the tribe to conform and to carry on as the experience of the fathers has dictated; it is behind much of our requirement of studies, mastery of subjects, memoriter recitations and examinations. Current discussions and efforts show that educators are abandoning this attitude and are thinking of the value of the individual and of the means by which they can bring his powers to fruition.

3. Introduction of means for the discovery of the abilities of individuals and for guiding the student in the development of his powers. Testing programs, advising systems, interviews, experiments, try-outs by the individual, many of which will be subjects of discussion in this conference.

4. Devising forms of educational experience suited to the development of the various traits actually found in children. Revising curricular offerings so as to provide suitable conditions for the chief types of students and to make available modifications suited to each individual.

5. Making adequate measurements of abilities and achievement by periodical examinations and tests of performance and by final comprehensive tests. As yet we know very imperfectly how to do this, but rapid strides are being made through the interaction and counteraction of the teachers and the test-makers.

Then perhaps it will be of interest to turn to some of the procedures by which these things may be accomplished.

1. Make the elementary school years a continuous experience in living instead of a succession of periods of memorizing descriptions of facts and processes and passing tests in them. For subjects of study there should be substituted activities suited to the age and abilities of the child in which he uses the tools of intellectual work as well as those of physical work.

2. Derive from the activities and the skill with which the tools are used indications for the guidance of the child: indications of his interests, drive, attention, specific abilities, etc.

3. Use cumulative records and keep constantly in touch with the child's development.

4. Develop in the teachers, especially those in advanced grades, efficiency in connecting up school activities with related services in society so that the individual pupil will clearly see his way of transition from school to life. This is guidance. The need is for many or most teachers to be experienced in this kind of guidance instead of each school having one or two so-called "trained advisers" who are wholly inadequate to the guidance of the number of pupils in the school.

There is immediate need for cooperation between secondary schools and colleges in the form of conferences of advisers from both institutions, the adoption of tests and forms of inquiry useful for the discovery of vocational fitness, and the guidance of pupils into curricula or forms of practical training devised to fit the needs of the pupils individually. This means the creation of unlimited variations or modifications of educational experience. As the machinery is developed the individualization of education can be carried out only by the adaptation of requirements by intelligent advisers to understanding pupils as each comes along. This will put an end to mass education characterized by thousands of students jostling one another at the college gates and in classrooms, each seeking that which he ignorantly desires (or that which his parents desire for him) and half ending in abject disappointment and discouragement, while scarcely any attain all that they might or render the full service which society has a right to expect of them.

5. In the transition from lower to higher schools, provide means of adjustment which shall take account of the differences in the facilities and effectiveness of teaching in the lower schools. A student of the most brilliant native endowments may come out of one of the splendidly equipped and staffed private secondary schools, or from a high school in one of our great cities with its immense plant crowded by students, or from a rural high school with three teachers and library and equipment in proportion. Intelligence testing shows variations in the mean and the highest scores among schools of the same category which would be astounding to either the parents or the teachers concerned with these schools. The advantage does not always lie with the largest or most richly equipped school. Here is a nice problem in evaluating high school achievement as an indicator of achievement in college. Parents and schoolboards through false ambition and pride have led on into college to their ultimate discouragement and detriment boys and girls who are by nature quite unfitted for the particular kind of work and service for which the college gives training. The Pennsylvania Study and the nation-wide sophomore testing in 1932 showed that most of the students in one college may fall below most of the students in another college in achievement in common tests. These colleges give their students approximately the same grades, and a B student from one college is as readily accepted in most graduate schools as

a B student from another college. At both the secondary and college levels are tremendous differences in the conditions under which students are seeking education and in the facilities and opportunities available to them. For the recognition of ability and the adjustment of the individual as he proceeds from one school to another, there are needed tools more delicate and more flexible than any as yet at hand. Many of our procedures and standards, especially of the accrediting agencies, are well calculated to do injustice to students, through lumping all together and giving to each individual student the accreditation accorded to the college.

Within the last forty years it has gradually become the universal fashion, enforced by the accrediting agencies, to refuse admission with "conditions." No person who has not completed the specified units and graduated from an accredited secondary school may enter a reputable college except on examination in the specified subjects. And yet we have graduated with honors and elected to Phi Beta Kappa persons who have never had anything like a regular high school course. The hanging together of colleges and high schools in this matter is costing many a boy a year or two of wasted time and often a permanent loss of interest in intellectual effort.

In the time service on which most colleges insist, in making courses and credits the chief feature of our requirements, in prescribing entrance units, and in setting up courses in college which must be taken by all students, we miss the main purpose in education. For the development of intellectual power and personal integrity we have substituted the taking of courses and the gaining of credits which in the modern crowded college may readily mean sponging off a friend or the fraternity file and cheating in examinations. Indeed, many colleges admit that it is impossible to eliminate these practices.

Instead of the intellectually and morally degrading regulations which have been maintained by the faculties in most colleges, I would have the college:

(*a*) Admit any person who gives evidence of mental ability, interests, and energy, of habits of application and concentration, and of the possession of sufficient tools such as vocabulary and speed and intelligence in reading to handle studies of college grade;

(*b*) Give him opportunity to get up studies of secondary grade which he may need but give him no credit for such studies;

(*c*) Aid the student to carry out his plans and give him as long or short a time as may be needed to educate himself, provided that he is doing work of college grade satisfactorily;

(*d*) Pay no attention to high school units for admission or to courses and credits in college or to time of residence as claims for a degree;

(*e*) Set forth as the requirements for a degree

  i. An acceptable objective and an intelligent plan for its achievement submitted by the student at an appropriate stage and approved by a duly constituted faculty adviser;
  ii. Interest and energy in studies and other educational activities called for in the plan;
  iii. Evidences of the development of intellectual power, of the plan being successfully carried out and the objective being attained; such evidences to be given through comprehensive examinations adapted on the one hand to the nature of the objective and on the other hand to the characteristics of the student.

Immediately it will be evident that if colleges generally operated along these lines, there could be no objection to accepting graduation from a secondary school as part of the evidence that the student possesses the minimum prerequisites for college work. Personally, I should be much more interested in the evidence furnished by the experimental high school curriculum which has grown out of the Pennsylvania Study or that which is now being proposed by the Progressive Education Association.

Whether we have yet developed means of determining the fitness of students for college which would give more valid and reliable results than are given by the present plan of prescribed studies can be told only after more complete experimentation with the forms of tests, rating scales, cumulative records, personal information, etc., now available. I am sure that most institutions do not have an adequate system of examinations to measure achievement and power of performance at the end of the college course. As soon as these implements can be built up, the college can throw to the winds all bookkeeping of courses and credits and grant its degree for intellectual attainment, personal power, and social purpose and responsibility.

What is most heartening about the present situation is that so many experienced and thinking men in all phases of educational work are concerning themselves with educational reconstruction; and that, too, with great initiative, inventiveness, liberality, and freedom from tradition. Statewide testing programs are being carried on in Minnesota, Wisconsin, Ohio, Iowa, Colorado, and interesting programs are projected in Indiana, Kentucky, Alabama, North Carolina, Washington, and other states. These look toward assistance and guidance to high school seniors with relation to college entrance. The spirit and purpose of these testing programs is admirably expressed in the report of the Wisconsin testing in 1929 and 1930 by Dr. Henmon and Mr. Holt:

> "The committee approached its work with a very definite philosophy in mind as a basis for its program. This guiding philosophy is that educational opportunity shall be viewed as a broad highway extending from kindergarten to college graduation and that every child has a right to travel this highway as far as his native interest, capacity and endowment will permit. If this philosophy is sound, then the committee felt that it must think of its problem, not in terms of that democratic principle which insists upon the political equality of human beings but in terms of the principle of the biological *inequality* of human beings. While the committee subscribed completely to the principle of equality of opportunity it recognized just as completely that equality of opportunity means, not identity of opportunity but diversity of opportunity. The committee hoped that it might be successful in giving additional impetus to a program which should result in a keener realization by the schools of the state of the responsibility of education to analyze every boy and girl for native aptitude, and to know him as an individual, to the end that every student as he travels the broad highway of education may be assisted in an adjustment to that combination of circumstances in life

which give, for him, greatest promise of success and happiness."

Wisconsin also has made definite experimental advance toward a program of testing and advising beginning in the ninth or tenth grade.

Within the colleges, personnel work—that is, advice and guidance for the individual student based on careful inquiry and accurate knowledge regarding the individual's interests, abilities and handicaps—has been rapidly growing. Attention is now being called to the need of an equally careful system of advising throughout the secondary school period, a need which is especially great in the public high schools. The program of the Progressive Education Association is a very promising experimental approach to the curricular problem in the secondary schools. The excellent work which has been done during several years by the Educational Records Bureau, to which we owe the organization of this conference, needs no exposition here.

Within the colleges there is great need of a new spirit in teaching. Several objectives in college teaching must receive recognition and take their proper place along with that of acquiring knowledge. Knowledge, like stock values, may be acquired and lost. It is time for us to recognize that the acquisition of knowledge is only a part of or a means to larger goods, namely, individual power of performance, human satisfaction and social welfare. The college teacher must realize that his supreme aim is the welfare of society through the elevation of spirit and purpose and the enhancement of power of the individual citizen. The teacher must use his subject to develop his students, not his students to build up his subject and his department. This principle should determine course offerings. A highly specialized "course" may well be given to one student if that student be good enough. To enroll fifty students in a highly technical course in which the professor is doing research work may mean disaster. One student of superlative intellectual gifts is worth an hour of a professor's time spent in discussing the most intricate and technical material. To release the same technical subject matter over the heads of fifty ordinary students as a smoke screen or a cloud of tear gas is little less than a crime. Many of our teaching procedures will be greatly modified when we make the development of the student the object of our endeavors.

Four processes must go hand in hand in our educational system:

(1) Discrimination, selection and guidance of individuals on the basis of their inborn abilities and traits. This must begin in early childhood and continue right on through to the end of formal education.

(2) The organization of the educational experience of each individual with primary reference to the general cultivation which will enable him to be a good neighbor and citizen, with special reference to that work or function in society which he can perform best, and with a happy balance between the two. This can be accomplished only by a differentiation of opportunities and curricula reasonably coordinated with the ranges of individual differences and the directions of individual ambitions and efforts.

(3) The classification of functions and duties of the faculty so that each member may be employed in that work which he can do best.

(4) The organization of the techniques of instruction to the end of bringing out the inborn powers of each individual and stimulating that self-education which alone is true education. In this field greater stress is to be laid on general integrating courses, on the social and human values of studies, on independent study under general tutorial guidance, on probing the student's thinking processes and proving the soundness of his conclusions, on examinations that measure the student's grasp of materials, his understanding of relationships, his integration of ideas, his appreciation of the values of his studies for human welfare, and his power of performance in his chosen field.

I need not mention the efforts that are being made to gain these ends. The proposals, experiments and developments in our institutions inspired by these purposes are familiar to us all. It is obvious also that the attainment of these ideals will require common understanding and cordial cooperation of all agencies in our educational system. Rivalries between secondary school and college can no longer be a part of the picture. Disjointedness, uncertainty and working at cross purposes in the education of the child to maturity and social responsibility cannot be tolerated. Modern life is too complex and the problems facing society too serious to admit of further wasteful effort on our part. This is the meaning of conferences like the present one. We have met here, and we shall meet in other conferences from time to time, to learn from one another what are the worth-while aims in our educational procedures, how they are to be accomplished, and how we can work together to assure to society the greatest service which the students can render.

J. B. JOHNSTON,
University of Minnesota.

Individual versus Institutional Accreditation

INTRODUCTION BY DR. W. S. LEARNED

It is often difficult to realize the later implications in changes that in themselves may seem to be trifling. The more we study the proposed changes in procedure for admitting students to college, with which we are now experimenting, the more we appreciate the fact that this shift from institutional responsibility to individual responsibility is carrying in its wake a number of changes which will undoubtedly produce results unsuspected at the present time.

Even from an educational point of view our country is divided into various semi-distinct regions. We have in the northern section a large number of institutions highly organized and with ample resources. In the South we find a region equally endowed in gifted human material, but with institutions many of which lack the intensive organization with which we are more or less familiar here, and which often likewise lack sufficient financial resources. Under these conditions the possibility of making the student individually responsible for his educational progress, as an alternative to the present excessive emphasis on the institution, has strongly appealed to many who feel they cannot receive their just due under the latter plan. One of the most hearty supporters of the present movement from this point of view has been President McVey of the University of Kentucky, to whom we will listen now on the subject "Individual versus Institutional Accreditation."

ADDRESS BY PRESIDENT MCVEY

MY TOPIC is made up of three large mouth-filling words. They, the three words, have had an honorable standing in academic fields. In the course of the first twenty-five years of study and administration of the admission of students to colleges the emphasis has been laid upon institutional procedure. Was an institution in the judgment of its neighbors good enough for a student to attend? Were the courses of study, the plant, the equipment and the faculty equal to the obligations laid upon them by the attendance of the student seeking an education? These were the queries raised particularly in the middle west. In the east the schools and colleges had a longer history, more prestige and a sufficient comprehension of their obligations to pass through this stage without much difficulty. Still there was doubt in the college area about the fitness of students in the secondary schools to meet the mind-stirring requirements of college life. The answer to this doubt brought into existence the college examination board in the hope that individuals as well as schools might be spurred to more vigorous and effective preparation for college work. The results are in doubt on more than one score, as evidenced by the shifting in type of examinations through the use of the comprehensive examination and the partial inclusion of the certificate system of admission.

In the middle west, where the public school system was more of a piece, the certificate plan of admission was almost universal in its use. The state universities were included as a part of the public school system and therefore compelled, by circumstances in which competition for numbers was a large factor, to accept the promotion system of advancement from high school to college. The doctrine of equality in opportunity and ability had been inherited from the pioneer days and was inbred in social, political and economic life. The certificate plan of admission of high school students to college was inevitable. With this system had grown up a scheme of inspection that might, through the agency of the state university, place a minimum requirement upon the schools that essayed to prepare students for college. Through the states, lonely individuals filled with missionary zeal and endowed with tough-fibered minds traveled from one end of the state to the other, engaged in listening to recitations, talking with principals, peering into dark corners and reporting the glaring defects to the authorities at the university, who in turn called attention in polite notes to the shortcomings of the schools.

Later the inspectors began to meet in the state capitals to discuss their problems and to tell stories of horrible hotels and to bemoan their fate and the impossible tasks that confronted them. Out of this were born the standardization agencies that bestride every state in the land and lay down the law on units, size of classes, sanitary fixtures, salaries, endowments, bigness of rooms, the number of books that make a library, degrees and all the rest that go with a thoroughly organized trade union and industrial cartel.

Looking back on this interesting and amazing history of education in our land, we perceive that all of these factors have had an important part in our progress. That the privately endowed schools and colleges should develop an examination system was unescapable in their attempts to find better qualified students. This was an inheritance from the older systems of education elsewhere and was supported by the principles of education then and now in vogue. The state university and many colleges carried along in the same currents were forced to accept the certificate plan and inspections, and finally to unite with schools and colleges generally in estabishing and maintaining requirements that were honestly and thoughtfully aimed to raise their standards. Meantime, doubts began to arise, not only about the certification system, but also about the piecemeal and even the comprehensive examinations. Suspicions cropped out that the requirements of the standardizing agencies did not touch the marrow of the problem. Sappers and miners were at work in the psychological field, personality was talked, and the war brought out the Alpha Test and with it an immense amount of new data that threw light on variant abilities in the individuals of the population. The colleges were having their problems with the hordes of students that crashed their gates. Something had to be done to satisfy the standards of education, to provide better education for those who were capable of it, and to raise the college from a secondary school to an institution of higher learning. There were involved in this vast system of education and its difficulties, problems of organization, of college instruction, of separation of secondary from university procedure, of better teaching, of guidance of students and of the determination of new methods of admitting students to college.

The first steps in the setting up of inspection and the establishment of standards for schools and colleges have already been shown. Under this system accrediting was based on institutional standing, and the movement of students from high schools to college and from college to graduate school was determined by the rating of the institution by the accrediting associations. The colleges and universities admitted the high school student because he graduated from a *class A* school, and the same process was followed in the migration of graduate students. There were exceptions to this statement where examinations were used in whole or in part, but, speaking broadly, students were admitted for college or graduate work in most cases on institutional standing. The registering offices have developed an extended system of admission blanks showing high school subjects and undergraduate courses, so that admission officers might have some idea of the student record. The value of the records varied greatly, depending on the marking system and the type of testing. The mass of students entering colleges and universities placed upon admission officers burdens that they could not meet, and thereby forced these officers into routine methods of procedure. The outcome of this system was satisfactory to no one.

It was clear to those who faced the facts that the higher institutions were physically incapable of accommodating all those who sought admission. One way of meeting that situation was to increase equipment and another way was to decrease enrollment by higher fees or by a selective process in admitting students. Neither of these proposals met the real problem. The real problem was to find out in advance those students who were able to profit by a college experience. This is a problem that challenges all the ability and all the machinery of the schools and colleges themselves. The public high schools cannot work out a plan by themselves, nor can the private schools go a great way without the help of the colleges. The colleges are faced with the problem of guiding, eliminating and stimulating the students enrolled in their classes. In fact the question is that of individual accrediting instead of institutional accrediting.

A number of surveys were directed toward the determination of ability to do college work and the coordination of the work the student would do after he reached college. In the survey made in 1922 by S. S. Colvin it was found, "that of those who intended to continue their education in some higher institution, a third of the boys and a little over half of the girls appeared to be bad college risks with about one chance in five of doing satisfactory college work. On the other hand, a fifth of the boys and one-seventh of the girls who did not intend to continue their education appeared to be good college material. Moreover, about one-fourth of the boys who stated that they intended to go to a liberal arts college were classified as bad risks. The corresponding ratio for girls was practically the same. Two-fifths of each were good risks."

Other students using psychological tests supported the findings of Professor Colvin. In a condensed statement the results appear to be that one-half of those who intended going to college were good risks, while one-fourth of those who had not planned to go to college were good risks. The Illinois findings appeared to indicate that persons with an I. Q. of less than ninety have little chance of succeeding in college courses. These results have now been subjected to serious scrutiny by many workers in this fruitful field. No one now would say that admission to college should be based on a test score, nor would many recommend that an applicant should be refused admission because of a low test score. The facts point to a combination of score, record and history as the basis of the information needed to determine admission. Simple as this statement is, the difficulties are immense, not only in determining the best tests but in providing the information and recording it in available form.

The Commission on the Relation of School and College set up by the Progressive Educational Association and financed by the Carnegie Corporation is endeavoring to bring about such changes in the relation of school and college as will permit experimental study of secondary education. The emphasis of the Commission is to secure better instruction and make it possible for schools and colleges "to help each student shape his course so that it will be best fitted to his needs, and so that his work will have meaning and significance for him." For our discussion the important part of the Commission statement is contained in recommendation A, in which it is declared that the high school student who is admitted to college should: (1) be possessed of the requisite general intelligence to carry on college work creditably; (2) have well-defined serious interests and purposes; and (3) have demonstrated ability to work successfully in one or more fields of study in which the college offers instruction.

The B part of the recommendation discusses the problem of records. The record should include a history of the student's school life and the results of tests, examinations and other evidence of the student's aptitude and achievement during the secondary course. The committee on records is endeavoring to determine what information the college needs for wise selection and guidance of students, how that information can best be secured, and in what form it should be recorded and sent to the colleges. This is all to the good, and the Commission is engaged in an effective work especially if it brings about the changes in the secondary school suggested in its report. The college administrator applauds vigorously when he reads the proposed accomplishments. These are greater mastery in learning, more continuity in learning, the release of creative energies, clearer understanding of the problems of civilization, guidance of students and good teaching, and the revision of curriculum materials and their organization.

A school may be able to bring much of this to pass, and the hope is that secondary education can move rapidly along the road indicated. There is, however, still the problem of guidance and direction which must be done with the individual pupil. It will be accepted by all that such a secondary school will have the additional problem of training some pupils who will not be capable of carrying college work. The college will wish to know whether the student is really interested in college and is able to carry the work of college classes satisfactorily. As the secondary school improves, some of the difficulties of college admission will disappear.

The accrediting agencies, because of their emphasis on outward and material standards of both colleges and schools, do not afford to the college the necessary assistance in securing good college risks. At the present time the interest of the agencies in bringing colleges and qualified students together is largely academic. Meantime, a number of the universities have cooperated with high school principals to use tests in finding out the weak points in their instruction as well as the types of pupils in their schools. Ultimately such tests must move in the direction of individualizing education according to ability and aptitude. The purpose is not to exclude students from education but rather to adapt the education to their needs. What is wanted, after all, is to find the most promising basis for constructional guidance. Again, it is not a compact, similarly minded group of students a college should strive for, but for a group, even heterogeneous for that matter, who would and could profit by college education. The difficulty now is that there are many maladjustments due to failure to know and understand the many differences in any group of college students. The outcome of such understanding would undoubtedly result in better trained college students. The administrator, to deal adequately with this part of the problem, must have comparative material that will tell him not only what groups are doing but what individuals in that group are accomplishing.

Through the leadership, guidance, and financial aid of a number of boards, real progress is being made. Some of the states are working at the problem. Among these is Kentucky. For eleven years the Department of Psychology at the University of Kentucky has been formulating and preparing tests which have been given freshmen. The blanks prepared were an outgrowth of continuous experimenting during this period. Each year the results have been checked for reliability and validity. The sectioning of classes in English, Mathematics, Chemistry, Psychology and German, at the University of Kentucky, has been based upon the results of the tests with restricted curricula for less capable students. These credit sections in the departments mentioned have been especially useful, based as they are upon a combination of intelligence and achievement. In addition, no-credit sections have been provided for freshmen who were low in Mathematics and English, and special provision has been made for more extended work in Mathematics for gifted freshmen. While the accredited high schools do not object to the use of tests in determining the kind of work a student may carry in college, they might be disturbed if the student were excluded from the state institution.

The Association of Kentucky Colleges and Universities at its meeting on January 9, 1932, adopted a report of a special committee recommending a cooperative testing plan for the colleges and high schools of the State. Since then the Kentucky Association of High School Principals appointed a committee to cooperate with the colleges. Tests were provided for such Kentucky colleges as desired to test incoming students this fall. Some beginning was made with the following eight colleges using the Kentucky classification test: University of Louisville, Berea, Transylvania, Western State Teachers College, Georgetown, Asbury, Union, and the University of Kentucky. About 2,200 tests were used. In the spring the tests will be offered to the high schools. At present the plan makes available a Kentucky History blank, a Kentucky classification test, a Kentucky Mathematics test and recommends the Iowa English test. The committee in charge has approved the use of the American Council intelligence test for those who prefer it. The cooperative system is an adaptation to Kentucky conditions. The blanks were prepared from the results of eleven years of continuous experimentation at the University of Kentucky. There is also a possibility of following up the results of the use of the tests within the state, since the service utilizes the various state organizations and their experiences. There should be no rivalry between this experiment and the work of the National Commission. There is, however, one drawback, and that is the absence of material for comparative results in states; but as rivalry has been disavowed repeatedly by all working in the field, there seems to be no reason why each state should not develop plans for the admission of students to college on the basis of individual history and school record. Already much has been done in many states, including Iowa, Ohio, Minnesota and Wisconsin. The conclusion appears to be that the best present criteria for admission to college are the pupil's record, his history, and the result of an aptitude test. These taken together form a fairly satisfactory basis for predicting college success and place admission on an individual rather than on an institutional one represented by the diploma of the school. After all, the broad highway of educational opportunity from kindergarten to college graduation should be open to every child in so far as his interest, capacity and endowment will permit. However, the possession and use of such material gained from tests is necessary to fortify the judgments of principals and admission officers, not only in dealing with parents but in discouraging some students and encouraging others to go on with their education.

The successful working of the individual accrediting of students will depend upon the officers who carry on the organization and the procedure involved in the process of selection, and upon the tact and understanding with which the program is brought to the attention of the pupils and their parents. It is essential also that these officers shall be trained in the procedure and philosophy behind the whole testing program. In fact the program will advance or break down in proportion as these superintendents, principals, registrars, deans and faculties believe in it. That many of these do not or that many have doubts about this program may be observed by the comments and discussions in any educational group. The danger to the program is that the technique may advance faster than the acceptance of it by those most vitally concerned, students and parents.

The other phase of individual accreditation which is just as important as the one of admitting students to colleges is the finding out what students do when in college, whether courses of study actually instruct and if the interest of students is increased and their adaptation and reaction to community, national and international life are enlivened and strengthened. The sophomore and senior tests provided by the Committee on College Testing have brought out an array of valuable and astonishing results. Some sophomores know more than many seniors. Few seniors make any progress in writing beyond the sophomore year. High marks are not always indicative of understanding or correlation of interest. The college faculties must know these things. There must be something wrong with the marking system, with the content of courses of study, or with the teaching procedure. The need of comparative records of student and classes, not only within the college but also with other institutions, appears to be decidedly pressing. The problem is not to be found only in the admission of students but in what they do and what they are given a chance to do after they enter college.

The college officer has an increased problem on his hands in the acceptance of many types of students who are subjected to the learning process. These students cannot be dumped into a hopper, as they are now. Searching examination of courses of study, consideration of interests and guidance of students in finding their interests must be initiated. Perhaps the guidance officer may come into his own, not only in numbers but in professional status.

Opposed to such a view is that of *laissez faire,* of letting the student find his way. There is much to be said for it. On the way, however, there is a great mortality which, added to incapacity, leaves a trail of discouragement, disillusionment, wrong development and loss of opportunity that are more than a system of education can be asked to carry.

The progress made here and there in the secondary field and in the college level encourages one to believe that we are on the way to individualization of education through the process of finding out what the individual is and what he needs.

As a last word, may I point out the necessity of seeing the problem as a whole. It cannot be taken for granted that all college work is the same and that marking systems are infallible. A student might do very well in art and related subjects and fail in an engineering college. The test of students for college work must be coordinated with the work to be done. Again, the requirements of one department of work in a college may differ materially from that of another, and the marking system show no material variation. The problem, therefore, is not alone that of admitting students to college by tests but of bringing the college, in its instruction and marking of students, to some basis so that admission and later performance may be compared. And again it must be kept in mind that the testing of students may not measure the elements required for success in the workaday world. No mechanical device can measure human achievement. So it is essential that those charged with the direction of education shall keep a sense of proportion before them and look constantly for the real goals of education.

FRANK L. MCVEY,
The University of Kentucky.

Freshman Admissions at the University of Chicago

INTRODUCTION BY DR. MANN

This gathering seems to me to be a very significant gathering, because for years American educators have been cooperating with one another in groups, small groups. There are a great many enterprises organized to press particular points of view or to promulgate particular achievements in education. Today we have a meeting of those cooperating groups showing that they have begun cooperating with each other. That is shown by the people who have been placed at the head table. It has been suggested that I could not give a better picture of cooperation among cooperating groups than by mentioning the people who are here at the head table. Dr. Smith, representing the Progressive Education Association; Dr. Brigham of Princeton representing the College Entrance Examination Board; Dean Johnston of Minnesota you already know, working on the Cooperative test program of colleges; Dr. Gleason of Vassar College; President Robertson; Dean Hawkes, who for the past seven years has been the father of all these cooperating enterprises; Dean Boucher, whom I shall introduce to you in a moment; President McVey of the University of Kentucky; Dr. Learned of the Carnegie Foundation; Dr. Thayer of the Educational Records Bureau; Mr. Twitchell of the Secondary Education Board, and Dr. Lester, another representative of the Educational Records Bureau. So you see we have represented at this group several types of cooperative enterprises which are now beginning to cooperate with each other. This, I think, has been a decided step forward in the improvement of American education. I am impressed with the program of this morning as indicating a type of evolution which is rather interesting.

I remember when I was in college it was the intention of colleges to find out who was fit to enter college. In my own instance I had to take a series of examinations, and passed them all except the examination in Latin rules of prosody. I was unfit to enter college because I had not committed to memory, because I had not mastered, these rules, which cover four pages in the Latin grammar. I learned those four pages until I could recite them backwards and forwards, and took another examination, which I passed. On the basis of this stunt I was judged fit to enter college.

President McVey has mentioned the second step in the process, where the standardizing agencies began to judge whether schools and colleges were fit to teach. Now we have reached the third stage of the game, the individualistic stage, in which we are trying to find out what college is fit for the boy to go to. The University of Chicago has been a pioneer in these developments. It is making many significant experiments to find out not only what boys are fit to go to college, but what college is fit for the boy to go to. A summary of these is presented in mimeograph form. Dean Boucher will tell us about some of these experiments at the University of Chicago, especially in reference to admission. I take great pleasure in introducing Dean C. S. Boucher.

SUMMARY OF MATERIALS PRESENTED BY DEAN BOUCHER

DEAN C. S. BOUCHER presented a mimeographed document containing a summary of a number of studies of freshman admissions at the University of Chicago. This contained a brief historical survey of the development of the present plan of admission from 1892, when the only electives for admission were Greek and science, to 1932, when the list of electives includes all secondary school subjects accepted by an accredited high school for its own diploma. During the early years of this development, changes were made on recommendation of faculty committees by the ordinary methods followed by universities generally. Since 1925 these changes have been guided by many objective studies of the correlations among the results of new type tests, the high school average, the first quarter average in college and the average of two years of college work.

Most of the studies drawn upon in preparation of the mimeograph document distributed at the meeting have not been published. Some of these studies were taken from Volume 5 of the Report of a Survey of the University of Chicago, prepared by Lloyd W. Reeves, John Dale Russell, and Guy T. Buswell, and soon to be published by the University of Chicago Press.

The tables presented gave the data which led the faculty in 1927 to require, for example, that a student with a high school average between 81 and 85 from a school where the passing mark is 75 must attain in the psychological examination a percentile rank not lower than 35 in order to be eligible for admission. These tables also show the gradual improvement in the quality of students that resulted from this and other similar requirements; the variations in the averages of freshman marks in five major departments; the relationship between age at time of admission and college performance; the relationships between college performance and the nationality and occupations of their parents, the ratings of the high school principals, the teacher ratings on attitudes toward studies, and college ratings on personality.

The experiments also sought to determine whether there is any relationship between college performance and high school average in the major subject studied; between Junior and Senior college averages in the major group studied in high school and the percentile ranks in the intelligence tests; between the college performance of students who had majored in Latin and those who had majored in English, or in History, or in Chemistry. Studies were also made to discover the significance of the variations in the rating system of public, private and parochial high schools and the relation of these variations to the percentile ranks as determined by the intelligence tests.

After calling attention to the samples of these studies in the mimeographed document presented at the meeting, Dean Boucher gave the following summary of the significant results that have thus far been obtained.

CONCLUSIONS PRESENTED BY DEAN BOUCHER

The University of Chicago has just completed its fortieth academic year. At first certificates of admission were issued to entering freshmen only on the basis of subject-unit examinations. Gradually a policy of admitting graduates of cooperating and accredited schools by certification was developed. During the last twenty years, certificates of admission have been granted almost solely on the basis of certificates from accredited secondary schools to applicants who met certain qualitative and quantitative requirements. During this period we have endeavored to develop an increasingly improved program for selective admissions. Periodically we have stiffened the qualitative requirements; though we have kept the same quantitative requirement we have tended to become more liberal in regard to specific subject-unit requirements.

Through the experimental development of a rather extensive application-for-admission blank we have become convinced that a selective admission policy can be administered effectively in direct ratio with the extent to which we are able to secure a complete picture of the development of the student during his secondary school period along all the lines of development that affect his successful performance as a student. In our endeavor to discover the relative significance of various factors and the validity and reliability of our crude methods of measuring them we have made many studies during the last ten years.

During this period we have devoted significant amounts of time, thought, and money to the development of as effective a program as possible for the educational guidance of each student individually throughout his college career. In the development of this educational guidance program we have found that all the information regarding an applicant secured by our Admissions Office in the endeavor to make wise selections is of great value to the student's dean and adviser after matriculation; indeed, suggestions from those participating in the educational guidance program have been responsible for many of the revisions in, and additions to, our application-for-admission blank.

Our various studies have shown us the following more or less significant results:

1. We have found that the problem of selective admission

and the problem of effective educational guidance of those admitted are not separate problems but are different phases of the same problem.

2. There is a significant correlation between a student's general average of high school marks and his general average of college marks.

3. There is a significant correlation between a student's percentile rank on the American Council on Education psychological examination and his general average of college marks.

4. There is a still more significant correlation between a combination of high school average with psychological-examination percentile rank and the college average.

5. Rank in the graduating class in high school is frequently more significant than the high school average mark.

6. In our endeavor to get as complete a picture as possible of the applicant for admission as a school citizen, we have found more or less significant correlations between such factors as his reading habits, his age, his chosen vocation, the occupation of his father, the nationality or race of his father, the principal's rating of the student regarding his influence over fellow students and his interests, purposefulness and capacity for study, and teacher's ratings of the student in regard to his attitude toward study, and success in college.

7. The holders of our competitive-examination entrance scholarships constitute our best student group of comparable size when judged by total undergraduate scholastic records.

8. The correlation between records made by students in their first year in the University and their subsequent academic records seems to show that a check on the freshman records at the close of the first year will indicate approximately the percentage that might be considered academic failures.

9. During the last decade, while we have striven to offer an increasingly better college program in an increasingly more effective manner to successively better student groups, and have gradually but surely raised both our entrance requirements and our scholastic standards, we have been delighted to note the development of a process of self-selection among

our applicants for admission: each year the percentage of excellent candidates among the total number of applicants has steadily increased, and impressively so in the two years since the announcement and inauguration of our new college plan.

10. We have found varying degrees of significance in the comparison of correlations of freshmen college grades in several subjects with percentile rank on the psychological examination, with the high school general average, with the high-school average mark in specific subjects, with scores on three of the four parts of the Sones-Harry High School Achievement Test, and with reading-rate and reading-comprehension tests given in Freshman Week.

11. After converting high school marks to a comparable basis, after converting college marks to a comparable basis, and after making due allowance for differences between students as reflected in their percentile rank on the psychological examination, we studied the junior and senior college records of students classified on the basis of fields of concentration in high school and in junior college, and found that high school and junior college preparation in any of the six standard academic subjects studied is about equally good preparation for later college work.

12. Though the student's high school average mark has proved to be of some value, this value is greatly increased when differences in scholastic standards between various high schools are determined and taken into account.

13. The student's average mark in college as a measure of educational capacity and achievement is of doubtful value unless changes in standard from year to year in the institution as a whole, the differences in standards between departments, and the differences in standards between individual instructors within a given department are established and taken into account.

14. The divorce of the examination function from the instructional function, with the examination function placed in the hands of an independent agency obligated to demonstrate the degree of validity and reliability of its examinations and their scoring, seems to promise greater accuracy in measuring

student capacity and achievement, not to mention the measurement of the effectiveness of instruction.

15. In our new college plan we are endeavoring to attain measurements of student attainment more significant than the old measurement in terms of course credits and marks, by setting up standards of achievement to be measured by comprehensive examinations as valid and reliable as can be administered by our Board of Examinations. Actively engaged in this endeavor to establish educational measurements in which we can have greater confidence at the college level, we are deeply interested in the establishment of more valid and reliable measurements at the secondary school level in order that we may grant certificates of admission more wisely and provide sound educational guidance for the students admitted. The most promising program for the attainment of this end—adequate information concerning the capacities, achievements, and interests of individuals, with a cumulative record of comparable test measures—seems to us to be found in the program now being developed by the Educational Records Bureau, the Cooperative Test Service, and cooperating committees of other educational agencies.

C. S. BOUCHER,
The University of Chicago.

The American Council Cumulative Record Forms for Colleges and Secondary Schools

INTRODUCTION BY DEAN HAWKES

The various organizations which are responsible for this meeting today are trying to perform a service which is very human. All of us, each in our own way, are trying to find ways of determining, evaluating and recording the fibre and texture of the make-up of young men and women, particularly so far as it has to do with their educational work. This kind of work has always been attempted by someone. In the old days the teacher and the clergyman, the advisers and the parents all attempted to do it. But they didn't have the techniques. All of us can probably remember men in the institutions we attended who were attempting to do this kind of work, evaluating not only the educational process but the human values of the students as well. They were wise men who did this, at least the best of them were wise. We can have all the techniques and all the tests and all the measurements in the world, but unless they are administered by wise men, I am not certain but that they do as much harm as good. At any rate, I would rather have the wise man without the techniques than the techniques without the wise man. The wise man plus the technique is the combination which we are working toward. Although I believe in measurement in education very thoroughly, I see the danger of it. The values of the old—the kind of values that we have always believed in—must never be lost sight of in the techniques which are new. Every time I think of the values of tests and measurements and all of the ideas which we are talking of today, I feel like saying the prayer, "Lord, teach us to keep the values of the old in the methods of the new."

Furthermore, it seems to me that we must all wherever we may be, not forget that we should start from where we are rather than from where someone else is. That is not always easy to do, because we are in different places, some of us are far along or think we are, and some of us are where we were fifty years ago, but wherever we are, the progress must be a continuous one from where we are through to where we want to go. I remember not long ago, there was a group of very well-meaning gentlemen who thought it would be a splendid thing to have a summer school for colored clergymen in Georgia. They made arrangements and had the staff brought together to bring these clergymen up to date in regard to doctrinal knowledge which they thought would be a great assistance to these clergymen in performing their professional service. The clergymen came from all over the south to this camp meeting. When they got there it turned out that in order to start from where they were, they had to organize a very different program from what was anticipated, because these clergymen could not read nor write nor cipher. They had to organize courses which started from where they were, but which at the same time saved their faces. So they organized courses in reading, writing, and arithmetic. But they called the course in reading Sacred Rhetoric; they called the course in writing Ecclesiastical Correspondence; arithmetic was called Holy Accounting. That was wise administration and as I understand it, very effective, for, starting from where they were, they made a little progress so that perhaps in succeeding summers they might take an additional step.

Now in this conference this afternoon we are attempting to set before you the point that has been reached. The first speaker of the afternoon is a man who has been in on this enterprise from the start. He was a member of the committee of the American Council on Education which had to do with the elaboration of the record card, and he speaks from the most intimate knowledge of its origin as well as of its development. It is a very great pleasure to be able to present to you my very dear friend, President Robertson of Goucher College.

ADDRESS BY PRESIDENT ROBERTSON

PROTEUS, keeper of Poseidon's flocks, had power to foretell human events, but he disclosed them unwillingly to mortals. In order to escape importunity, this ancient one of the sea changed his form, terrifying the seeker after guarded knowledge. Every day, when the sun had climbed to the mid-most heaven, Proteus came out of the briny waters and followed the herd of Poseidon's seals to the rocks, where they lay in the hollows and, having counted the sea monsters, he laid himself down among them and slept. That was the moment, Menelaus was told, to seize and hold him courageously until he answered all questions. That was the moment when Menelaus, disguised as a seal, grasped him. Proteus instantly became a frightful lion, well maned. Menelaus did not let go. The lion became a scaly dragon and then a panther and then a boar of mighty make, wet water withal, and then a tree that shook its leaves aloft. Firmly and confidently, Menelaus held each succeeding manifestation. At length Proteus took his usual form and answered the queries of King Menelaus.

The Protean character of every human being has long been recognized. Sacred writings present the changes in King David and in Peter, who at one time denied his Lord but later became the rock on which His church was builded. The drama shows forth the changing character of an Oedipus, a Macbeth, or a Peer Gynt. The novel and shorter narratives give pictures of a changing personality like that of Dr. Jekyll and Mr. Hyde. Modern biography attempts to understand real men, like Deacon Brodie, the original of Stevenson's famous dual character, especially the motives which govern their actions at various times. In each of these literary forms it is important for the reader to remember that the entire story must be considered if any one character is to be correctly understood. Every English teacher knows the tendency of young students to interpret a line of Shakespeare by considering only that one line; and every teacher of English literature seeks to have his students realize that the reader, and especially the actor, who must interpret a character at a single instant as exhibited in a single line, is obliged to bring to bear on that line his knowledge of every word which comes before and every one which comes after.

To understand an individual so that he can be guided to his best development, education, helped by psychology, seeks to know the individual at different times and under different conditions. It is not enough to be aware of the characteristics of a person at a given instant. At one moment with amused dismay we declare that Tommy is a little monkey. At another time we think him a perfect angel. On still another occasion, irritated by some utterance or deed not characteristic of angels, we emphatically say that he is a jackass. But Tommy—the real Tommy—is only momentarily monkey, angel, or jackass; he is not really and permanently any one of these any more than Proteus was only a lion or a serpent or panther or boar or water or tree. If we wish to know the real Tommy, like Menelaus, we must hang on during all manifestations until the real Tommy declares himself.

Continuity in the study of the individual has been secured in some schools by keeping a child under the observation of one teacher for long periods. There was a time when the same teacher learned to know Tommy in reading, writing, and arithmetic—not only in one grade but, moving up with the class, in higher grades. Now we have given Tommy a separate room teacher, writing teacher, reading teacher, and arithmetic teacher. Formerly, a single teacher could observe the individual under many school conditions in several classes. If that teacher knew what to observe, then the judgment of Tommy was likely to be a sound one. Even so, we were likely to accept the judgment with some caution, because we knew that a teacher's opinion might be strongly subjective. Greater reliability became possible, so statisticians tell us, when the number of observers was increased by the assignment of special subject teachers. As the use of specialists increased, however, at the high school and college levels subjects became more important than people instructed and we began to hear of the disappearance of the personal touch in education. Now we are engaged in a struggle to regain the "personal touch" while retaining all the advantages of departmental specialization among teachers. In schools we are seeking to do this by emphasizing the personnel functions of the teacher. In some school systems the room teacher is encouraged to anticipate a pupil's arrival in her jurisdiction by conferring with teachers in the lower grades. Room teachers, subject teachers and vocational counselors are invited to keep in touch with each other concerning pupils. It is desired of all of these teachers that they follow up their pupils in higher grades and secondary school and college. All of these things are done in the schools of Providence. In colleges, too, we try to secure fuller and more accurate knowledge of the individual by affording some teacher a special opportunity to observe and guide. Sometimes we assign an adviser who is more or less in touch with the student in sophomore, junior, and senior year. Sometimes, adopting the plan of our Oxford and Cambridge cousins, we have a tutorial system. Moreover, when it is necessary to consider the case of a particular student who seems to be failing in his work, we assemble members of the teaching and administrative staff who can give information and express judgments regarding the student in question. For example, at Goucher College the committee before which such a case would come is made up of the dean, the two physicians, the student counselor, the vocational secretary, the registrar, the chairman of the committee in charge of Freshman English courses who has made of the intimate knowledge which composition teachers get a genuine contribution to personnel procedure, the director of physical education, two professors through whose laboratories pass most of the students in college, and three other teachers whose subjects and personalities make them successful in learning students. All this is good. But in school and in college something more is necessary. Even in the college committee just described it sometimes happens that the officer whose opportunity to know significant things about a student is not present. Even in the well-organized school the teacher whose judgment is most desired at a critical moment may not be available. Certainly when the information and opinions are most needed—at a time when the student passes from the jurisdiction of the secondary school to the college—the greatly desired personal conference with those who know the student best becomes a difficult and generally impossible thing. Then we must depend upon the record.

Not long ago, when visiting a so-called small college in an eastern state—a college of two hundred students—I was informed by proud executive officers that being a small college that institution had intimate knowledge of its students and could educate them more effectively than a large college could. Sitting in the registrar's office and fingering the cards of students, I asked such questions, very simple ones, about one lad as the dean of a medical school might ask regarding that student. President, dean, and registrar could not give me information or opinion. They declared that they knew nothing about that particular boy but that Professor Blank, who was in New York that morning, knew all about him. Previous questions had shown that this confidence might not be entirely justified, for I had discovered that some of the professors thought they knew their students because they called the young men by their first names. But assume for the moment that Professor Blank did know what useful observations to make and had made them fully about this boy. "Suppose," I said, "that Professor Blank is killed by an automobile on his way back from New York. Then not only is he out of luck but this boy is out of luck also, for there is no one in this institution who can answer a question about him, the reply to which will be of importance in developing his career." That president, I understand, has instituted since then a form of record useful in the guidance of the undergraduate.

What should be included in a record used by schools and colleges? That depends, of course, upon the use which is to be made of the record. In my opinion nothing which is not likely to be of use should be recorded, and that for several reasons, not the least of which is cost. A single item on a form is not a single item from the point of view of the executive who must watch the expenditures for clerks and stenographers. One item may mean ten thousand entries to be made by a salaried employee for ten thousand students. It is very important to keep down the number of items to those really to be used.

Any record is primarily for the guidance of the individual student in understanding himself—his aptitudes, abilities, and interests—so that he may develop them in a way to make him effective and happy in his world. Any record should be useful also to those responsible for counselling the student in school or college. Should confidential information be recorded and made accessible to all teachers? For example, should disciplinary action taken because of cheating on an examination be passed on? The present practice among colleges, I understand, is not to give this information on a transcript of record if the penalty has been satisfied. If the student is still under discipline the fact is stated, and frequently a supplementary explanation is supplied by a responsible college officer. When a student within a college passes from the jurisdiction of one teacher to another, should such information be given to the second teacher? There are, of course, many questions which arise in connection with the use of data. We can decide them by asking ourselves what is necessary or desirable for the highest development of this particular student.

Conspicuously important is the use of the record at the time a student completes a stage in his education as we have organized it in the United States—at graduation from or admission to an institution. Some of us are trying to think of graduation requirements in other terms than semester hours spent in a classroom or classes for which "credit" or a "passing grade" has been secured. Some of us have been trying to formulate the things we expect a Bachelor of Arts to know and do and be. Many years ago Woodrow Wilson, addressing the Association of American Universities, said: "Find out what you want in a college graduate and let the ways of attaining that work themselves out." Some of us believe that when we have expressed our objectives in terms of life activities we can find a way to measure attainment of those objectives and of indicating it on the record.

In Goucher College, for example, we believe that the life activities of every educated American woman will include the following: (1) The acquisition of knowledge which will enable one to establish and maintain bodily and mental health; the development of skills contributory to this purpose; and the determination to be well in body and mind; (2) achievement of the knowledge, skills, and will necessary to understand and communicate ideas expressed chiefly in the mother tongue but also through other mediums; (3) acquisition of knowledge, skill, and will necessary to enable one to expend one's time, energy, and money in a way that will bring the maximum satisfaction, economic and aesthetic; (4) acquisition of the knowledge, skill, and will needed to maintain effective and happy human relations; (5) the ability and will to appreciate the beautiful; (6) the knowledge, skill, and will to integrate one's personality, to adjust oneself to the universe and to God.

We have set up a committee of the faculty in charge of each of these objectives. Each committee is endeavoring to formulate its purpose more definitely, to keep always before the students and teachers the importance of attaining that particular objective and to find ways of measuring attainment. Of course each committee is concerned with curriculum. Existent courses may directly help the student to succeed with respect to a given purpose; for instance, courses in biology, physiology and hygiene, psychology, and physical education assist in establishing and maintaining bodily and mental health. To the curriculum itself is due largely the interesting record of Goucher graduates in maintaining effective and happy human relations. A very high percentage marry within five years after graduation; the number of divorces among them is negligible. Heads of schools tell me that Goucher graduates are unusually skilled in getting on with students, parents, and other teachers. Goucher women know how to get on with other people, or, if you please, how to manage others. Each committee considers not only existent and possible courses but all influences which during the college experience may effect the student's attainment of a particular objective. The Committee on Comprehension and Communication of Ideas, of which the chairman of the English Department is head, is concerned not only with the achievement of students in composition courses but their habits of speech and writing in other courses and in activities outside of the classroom. The Committee on Aesthetic Appreciation has made suggestions regarding the quality of souvenirs on sale in the College Book Store; has offered for sale modern etchings and inexpensive color prints of great paintings, ancient and modern; and has organized through the Book Store a loan collection of pictures for students' rooms. It is conceivable that each of these committees on objectives may formulate tests which will measure the student's achievement inside and outside of the classroom without regard to course credit, very much as the Chicago Board of Examiners, described by Dean Boucher, tests the attainment of Chicago undergraduates.

The admission to an institution with such objectives of persons who may hope to attain these objectives calls for all information helpful to those who must make

"the golden guess
That's morning to the fair round of truth."

There was a time years ago when each college considered only the record of an applicant on the entrance examinations set by that particular college. Examinations differed among the colleges. The College Entrance Examination Board cleared up that difficulty by offering examinations for all colleges who chose to use them. Meanwhile, especially in the west, there grew up the certificate system which certain colleges and secondary schools favored because it liberated the schools from domination by final examinations. The difficulty which colleges have found in the certificate system is chiefly due to the varying standards of secondary schools. An "A" in one institution does not necessarily mean the same thing as an "A" in another. The use of comparable tests—College Entrance Examination Board tests, and the achievement tests developed by the American Council on Education Committee on Personnel Methods, as well as by other bodies—has enabled colleges to estimate more accurately the quality of work done by students and has given useful indices to the grades assigned by schools. Stanford University, for instance, has correlated grades secured by students in school and in Stanford, and has found a way to evaluate the grades given by schools which send students to Stanford. Enough has been said about the subjectivity of grades. The deliberate separation of the measurement of achievement and the measurement of industry, persistence, and other qualities has come about through the development of achievement tests and also through personality reports. Of the importance of these last I might give many illustrations from Goucher College experience. In my opinion, tests of emotional stability, like the Thurstone Personality Schedule, are very important in admission procedure. Useful personality report forms have been developed by the American Council on Education Committee on Personnel Methods. Some of you are familiar with Professor H. C. Morrison's important book, "The Practice of Teaching in the Secondary School." In it, on page 594, occurs the following passage:

> "In the end, the administrative officer has ground for deciding whether or not the pupil has taken on the characteristics of interest in his whole attitude toward life—whether or not he is likely to exhibit in later years an inclination to use his educational capital. The decision upon this point must rest upon the evidence of sustained and consistent interest. If we look back through the personnel reports and find here and there a good piece of evidence but no continuous and consistent story, we cannot conclude that the pupil has taken on the characteristic which we have in mind. If, on the other hand, we note in early reports an occasional bit of evidence and as the story goes on a steadily accumulating series, ending in a consistent record of the attitude in some form in almost all the school work, then we can conclude that the pupil has acquired the characteristic. Again, however, we may note that the earlier bits of evidence eventually run into a record of quite unusual special interest in a particular line of study united with marked attainment and special ability. In that case we probably have evidence of special talent."

In Dr. Alexander Meiklejohn's volume, "The Experimental College," just issued, he speaks of the personnel records kept during the Wisconsin experiment:

> "The second set of records does, however, seem to be, in some measure, usable. As already stated, each adviser is ac-

customed at the end of a six-week period to sum up in writing his impressions of his pupils, and to pass these on as helps and recommendations to the next advisers to whom the pupils go. And further, at the end of each year these reports are summarized in characterizations of the pupils, for the one-year or the two-year period, and these are sent to the parents. There was much fumbling before these arrangements for 'student estimates' were worked out, but they seem now to serve their purpose very well. It may be added that an essential feature of the letters to parents is a request that they will question or correct the estimates which the college has made and will in turn tell very frankly what they think has been the influence of the teaching upon their sons. Some of these replies have been exceedingly significant and helpful."

Thus far I have sought only to suggest in general terms the importance of a record which shall have continuity and comparability. There are many possibilities.

One record has been developed by the American Council on Education Committee on Personnel Methods. This committee was the outgrowth of a meeting called January 1, 1925, by the National Research Council, Division of Anthropology. Representatives of fourteen universities attended the National Research Council Conference on Vocational Guidance in Colleges. Dean Hawkes became the able and enthusiastic chairman of the Advisory Council and an Executive Committee, which included H. E. Hawkes (Columbia), H. W. Holmes (Harvard), C. R. Mann (American Council on Education), W. D. Scott (Northwestern), and W. Wellman (Dartmouth). From Mr. John D. Rockefeller, Jr., a grant was secured in 1925 which provided for a study of the situation by L. B. Hopkins. This report appeared in THE EDUCATIONAL RECORD for October, 1926. Encouraged by the interest reported by Mr. Hopkins, the Executive Committee presented to Mr. Rockefeller a plan (1) to inform the colleges and universities of the United States concerning the best personnel methods; (2) to prepare a personal record card which should afford personal information to teachers and administrators at the college level; (3) to prepare achievement tests and make available all the facts concerning them in an effort to stimulate such testing; (4) to develop objective and useful measurement of character; (5) to prepare vocational monographs. For these projects Mr. Rockefeller in 1927 granted to the American Council on Education the sum of $20,000 a year for three years. The Executive Committee then decided to invite the cooperation of scholars in the work of four committees, of which the chairman of each should be a member of the Executive Committee.

The Committee on Personal Record Cards undertook to prepare "(1) a complete educational personal record to contain items of record covering a student's school life from the seventh grade through college, including personal items and extra curriculum and academic records; (2) a college personal record including items selected because of their immediate utility in the care of individual students at the college level, items from the secondary school record, the college record (personal, extra curriculum, and academic). This card is intended to be the key personnel card of the college distinct from the record kept for admission or for the cumulative record of grades."

Professor Ben D. Wood, of Columbia University, and Professor E. L. Clark, of Northwestern, developed a tentative record card, and this was offered to schools and colleges for experimental use. In introducing it, Dean Hawkes said:

> "Although such a record form is in a sense a routine tool it is really far more, because the items included on the record and the instructions given in their use represent the findings of many investigations from many points of approach to the problem of individual guidance and development. The record form has comprehensiveness, a novel and very timesaving chronological recording scheme to recommend it, and more important still it is the reflection in record form of a point of view—a point of view which many of the colleges of the country have hoped to develop and toward which they are still directing their efforts. The form is probably far from perfect. Many suggestions as to its improvement will be made, but it is a start, we believe a good start, in a comprehensive standard and useful record of a student's complete activity in college."

The following figures give some idea of the extent to which the cards have been used by colleges and secondary schools (236 institutions in 40 subdivisions of the United States):

	College	*Secondary School*
1928......	18,250	1,100
1929......	26,077	24,040
1930......	17,974	21,389
1931......	12,329	18,353
1932......	10,670	10,398
Total...	85,300	75,280

In the state of Pennsylvania 101 institutions used the card in connection with the Pennsylvania Study, under the auspices of the Carnegie Foundation. A sample may be secured on application to the American Council on Education, 744 Jackson Place, Washington, D. C.

The American Council on Education Committee on Personnel Methods has emphasized the experimental character of this form and invites suggestions for its improvement. Already some institutions have found desirable the use of a single card instead of a folder. The head of one of the continuation schools of New York City arranged the record for a Randex file. The important thing is to get a continuous record of comparable items useful in the educational guidance of each student. The committee will welcome every criticism and suggestion for improvement. Their attitude is that which Mazzini has expressed in his "Thoughts on Democracy": "The problem of which we seek the solution is an educational problem, the eternal problem of human nature; only at every great era, at every step we ascend, our starting point changes and a new object beyond that which we have just attained is brought within our vision."

DAVID ALLAN ROBERTSON,
Goucher College.

The Colleges Undermine Themselves: An Indictment of the Admission System

INTRODUCTION BY DEAN HAWKES

It is the pleasure of the Educational Records Bureau and other associations to make use of these materials and tests and measurements that have been described today. Just because the method is new is not the point. A new pump won't help a dry well. The newness of the thing has nothing to do with it, but it is a device which enables the colleges to do their work better than they have ever done it before. It enables them to reduce a certain self-complacency which it has always seemed to me was entirely misplaced. A college that admits a certain number of men only to drop a third of them or a fourth of them at the end of the freshman year has no business to pride itself upon its standards. It should rather put on sackcloth and ashes for the incompetence of its methods of admission.

This evening we have the honor and the pleasure of listening to a gentleman who has given profound attention to this aspect of things. Ten years ago the topic on which he is to speak would have caused a riot, but today we all agree with him. Dean Henry W. Holmes, of the Graduate School of Education at Harvard University, will speak on "The Colleges Undermine Themselves: An Indictment of the Admission System."

ADDRESS BY DEAN HOLMES

I

IN THE preparation of this speech, I have been obliged to proceed under certain very serious handicaps. If you will refer to the program of this day's meeting, note that it begins with a general address by Dr. Learned, note the other distinguished speakers of the day, and observe especially the scope permitted to many of them under the titles set down for their addresses, you can hardly miss my meaning. Here I come, at the closing hour of such an occasion, doomed to the attempt to say something at least interesting, and if possible something new. I cannot tell what your expectation is as to my success in fulfilling this assignment, but I know very well how I have felt about it ever since the program first came into my hands.

I must give Dr. Wood due credit for the terms on which he invited me to speak. They were generous; they were, indeed, large-hearted. Dr. Wood told me I might be poetic. He released me from any attempt to be technical, with the implication that I need not bother at all about the facts in the case. He implied that I might approach the subject with that freedom of spirit in which Sandy, the Scotchman, approached the French language. When Jock inquired of him how one asked, in French, for *two* eggs, Sandy replied, "Ay, ye juist say 'twa oeufs,' and the auld fule wife gies ye three an' ye gie her ane back." In this pleasant looseness of construction, I am to be allowed to say anything I like about admission to college; and this, I admit, might be a genuine advantage if I were addressing any other audience, at any other time. It is only with the hope that you are now somewhat tired, ready to relax a bit and see some of the humor of the situation, that I dare go on.

This whole topic is, of course, dangerous enough in itself. I have no detailed knowledge of the history of college entrance requirements in this country, but I have no doubt that historical research would show how deeply individual prejudices, the special interests of certain college departments, and the pet theories on which college presidents have staked their reputations, have entered into the formulation of our admission procedures. I wonder if anything so important as admission to college has ever been so much the product of academic log-rolling. It is natural enough to hold together in one large conception our college admission system and the national protective tariff. We seem to have been incapable of approaching either of these high matters on the ground of general principle.

The mere diversity in the entrance requirements of our numerous American colleges suggests that the colleges have governed themselves in this matter only slightly and inconsistently by any theory at all. So greatly do admission requirements vary from college to college that one would certainly be hard put to it to group the colleges in this respect according to schools of thought. A school of thought implies, after all, that some one has done some thinking. If this seems too unkind a cut, let me hasten to admit that there are exceptions to prove the rule. It is quite obvious, for example, that there is a well-considered theory behind the entrance requirements of the University of Chicago.

It may be possible, to be sure, to discern in the entrance requirements of a large number of our colleges the working of the theory of formal discipline or mental training. School subjects, these colleges seem to say, are merely tools for sharpening the wits. They need not be remembered, nor is it expected that they will be carried to any stage of completion in the college after the school has used them for a while to exercise the faculties of applicants for college standing. Of course this theory is now only a scarecrow, and so many investigators and speakers have picked the stuffing out of it that I ought not here to indulge in that favorite pedagogical sport. I am obliged to note in passing, however, that the theory of mental discipline has been until recently the only theory very certainly and clearly at work in the determination of college admission requirements. I have been tempted, from time to time, to suggest to some aspiring candidate for the Doctor's degree a survey of entrance requirements to show how very many different subjects, every one of them to be dropped and forgotten at the college gates, have been held by college faculties to be essential for that training of the mind without which no student is fit to enter upon the real period of education which begins with the freshman year. But when I consider that times are changing and that there is a widespread disposition to deal with this great problem in a new and better way; when I consider also the significant fact that no one in high places now openly uses the disciplinary argument to support traditional procedures; then I willingly relegate to the rôle of an historical treatise my study entitled "How Discipline Once Bedeviled Our Admission System."

One of the major handicaps to a generous and poetic treatment of the problem of admission lies in this important fact—that admission to college is, in any case, a sort of accidental necessity. The forces at play in the institutional organization of American education have worked together in somewhat haphazard fashion to produce a break between school and college at a point that is more or less convenient and justifiable socially and psychologically but quite inconvenient and unjustifiable, indeed quite accidental, from the standpoint of education. In struggling with the problem of admission, we are dealing with difficulties largely absent in other great national systems of education. The junior college seems to be, in part at least, an American device for bridging a gap which comes at an unfortunate place in our general scheme of education. The trouble is that the junior college threatens the integrity of the four-year liberal-arts college, and the four-year liberal-arts college is a distinctively American institution which we have all learned to love and whose special values most of us are anxious to retain. Looking at the problem from this point of view, one might phrase it thus: How can the four-year college so manage its requirements for admission that preparatory schooling shall be something more than a kind of disconnected time-serving without any clear sequential relation to what is to follow?

But this mention of the junior college makes me all the more conscious of another of my handicaps. Institutional interests are so deeply involved in this whole matter of admission that most of us must approach it with a certain caution. If I achieve any boldness in my own attack, it will be partly because I am aware of a kind of geographical protection. Like the new negro maid in a Chicago household, I am far from Boston. The story now going the rounds recites that Liza was in training for the duties of a second maid, among them the answering of the telephone. One morning she replied to an insistent call, and her mistress heard this monologue: "Yas, this th' raisidence o' Miss' Price. Yas, it suttinly is. Goo' by." A second ring and Liza again asserted that Mrs. Price did live there and added, "I done tol' yer it is. Goo' by." A third call brought the same response from Liza, and Mrs. Price then interfered. "Liza," she said, "what are they saying to you?" "Why," replied Liza, "she say to me, 'Do Miss' Price live hyer?' and I say she suttinly do. And she say, 'Long distance from Boston' and I tell her, 'Yas'm, it sho' is.' "

II

The habits of institutions are hard to change. So much has been invested in the very bricks and mortar of schools and colleges, so many patterns have been worn into the minds of teachers and parents and students, that an educational reformer has a discouraging task. He will be lucky if his fame is not mostly posthumous.

> ". . . . But the fair guerdon, when we hope to find,
> And think to burst out into sudden blaze,
> Comes the blind Fury with the abhorred shears,
> And slits the thin-spun life."

On this score, I do not, of course, advise Dr. Learned and Dr. Wood to adopt that other alternative suggested by Milton—

> "To sport with Amaryllis in the shade,
> Or with the tangles of Neaera's hair."

No, it is best to observe that there are now signs of hope all about us. I have mentioned the entrance requirements of the University of Chicago. Reading in the volume called "Five College Plans" Dean Boucher's admirable exposition of the new organization of college work at his institution, in which the treadmill accumulation of credits is so completely abandoned, it is a shock to turn to the statement in the Chicago catalogue on subject requirements for entrance and find there at the very beginning the sentence, "Admission requirements are reckoned in units." Is admission the last stronghold of that administrative genius who made the University of Chicago famous for its division of time and knowledge into uniform parts? But when one observes that English is the only subject specifically required, that the rest of the requirement calls only for a major and a minor, that if the major is in language all three units must be in the same language, and that five units may be in any single subject, hope revives.

In the Stanford requirements it is heartening to read that the only prescribed subject is English. In passing, I might remark that I should be interested to know why Stanford is satisfied with only two units in that subject. Have the exigencies of measurement in units, as applied in California, led the Stanford authorities to despair of getting schools to give more than two years to the study of the mother tongue; or does the California climate lead to extraordinary achievement? There may be a mystery here, but there is none in the effort Stanford makes to connect school work by guidance with the work in its own Lower Division.

If Swarthmore's five required units in foreign language were all in one language, either by prescription or by advice, I should find something more nearly strange and new in the Swarthmore plan. If the recent enactment of the University of Buffalo, whereby specific requirements in language and mathematics have been dropped, were based on a theory rather than on a condition which confronts the University, I should be more startled by the news. If the Harvard Upper Seventh Plan were not a mere experimental exception in a system still very largely traditional, and if the recent recommendation of the Overseers' Committee on Harvard College that the Old Plan be dropped had aroused more interest, I should feel that more good were coming out of Nazareth. If Columbia, insisting on three years of one foreign language, and making generous use of placement tests for advanced standing in the earlier years of the College, did not still cling to unit requirements otherwise, I should be more certain that progress had found its leader in New York. There may be many more moves toward an admission millenium than have come to my attention and some of them may be so Utopian as to be satisfactory from the most poetic point of view. I can but note these specific signs of hope and shake my head at what appear to be their compensating faults.

Perhaps the most important sign of hope lies in that combination of efforts now in charge of the very organizations that have called this conference. Like President Eliot, I am in general "expectant of good," and of course I must realize that too much confidence in new devices and new methods can hardly be expected of naturally conservative institutions. Surely, however, we do not deceive ourselves when we take encouragement from the work of the Educational Records Bureau and the Cooperative Test Service, the achievements of the Pennsylvania Study, the Secondary Education Board, and the Progressive Education Association, and the recognition now accorded to Professor Brigham's work on the Scholastic Aptitude Test. It all looks toward reality in education. If objective tests of school achievement seem to be mechanical and formal, let it be remembered that they measure growth in achievement, progress in the actual thing we are working for, which is mastery of subjects, not the completion of a school unit. Is the difference hard to see between a cumulative record in objective tests and a grade on one of the examinations of the College Entrance Examination Board? The individual student may now trace his progress in absolute terms, for himself, with confidence that standardization has ruled out most of the chance that inheres in ordinary examinations and that the objective character of the marking really tells him what he did. I am willing (perforce, perhaps, being technically an ignoramus as to tests) to admit that objective tests are not a panacea and that they can be much improved; but I insist that what the Committee on Personnel Methods has done under the leadership of Dean Hawkes, what Dr. Wood and Mrs. Wood are doing, what Professor Brigham has done, and the results already achieved by Dr. Learned in Pennsylvania, are beacon lights on the path to better things.

Suspicion, I know, follows every effort to measure abilities and information with new accuracy and by objective methods. We shall hear again and again the statement that an objective test measures only the power of the pupil to recall disconnected facts. But in the first place that is not wholly true, for an objective test may also measure judgment and the power to reason; in the second place, the command of facts is far more symptomatic of general intellectual ability than is commonly supposed; and finally there are plenty of ways in which objective tests may be supplemented by other measures without giving them up in favor of the exclusive use of examinations of the essay type. The question at issue, however, is not confined to the merits of objective tests as compared with ordinary examinations. It concerns what we are after and whether the use of objective tests will help us to get at it. No single means can claim exclusive merit. Testing seems to offer new light on what pupils are actually getting out of their schooling and hence new light for guidance. Everyone who has any power over admission to college should read the report of the Eastbourne Conference on Examinations and especially what Thorndike and Judd had to say about knowing what we are after when we examine. Unless admission means simply a certificate to the effect that a pupil has "had" so many "units," or that he is simply either "in" or "out," his entrance tests should help to analyze his mind and show his needs. Incidentally, Dr. Wood has remarked to me that the colossal waste of public funds in teaching much that pupils can never fully learn might be greatly reduced by objective testing. That observation may not have any direct bearing on the problem of college admission; yet it is not entirely impertinent to this discussion.

III

But now to return to the main line. If candor obliges me to call attention to all these new and hopeful efforts to make straight the path from school to college, how can I proclaim in the title I have chosen for this speech that the colleges, through their admission system, are undermining themselves? Indeed, how can I indict the admission system when the first thing I say about it is that it isn't a system at all but a hodgepodge of specific prescriptions none of which has any sound theoretical justification? Well, titles are like newspaper headlines—they always do some injustice to what follows. I have already admitted enough to prevent me from asserting that all the colleges retain admission plans that contradict the very theory of their own collegiate program. Yet this seems to me to be just what some colleges are doing. It seems to me, on the whole, to be what Harvard College is doing. I find a contradiction in principle between the general trend of thought about college teaching and the college curriculum and the prevailing method of admitting students into the college. Of course it is not true that all colleges are undermining themselves by their handling of admission; but it is true that the more progressive any college is with respect to its own work, the more it stultifies itself by maintaining an admission scheme that is not based upon the same general ideas. Although there is no common system of admission in this country, there is a certain character that is common to a very large majority of the admission plans of the colleges; and it is this common character of admission plans that seems to me out of gear with the newer and better plans for college education. Harvard College, pioneering under the leadership of President Lowell, remakes in twenty years its entire program; the degree is no longer given simply on the accumulation of marks earned in a series of unrelated courses; the General Examination is introduced as the key to a new plan of instruction, with tutorial teaching and a system of Houses to complete the program; and the whole reorganization, carried out with amazing vigor and consistency, results in a continuity, coherence, and reality in college studies that makes the Bachelor's degree from Harvard mean more than it has ever meant before. Yet Harvard maintains a system of admission, liberal enough, to be sure, in some respects, but certainly not based on any effort to apply to secondary education, or to secondary education and college education taken as parts of one unitary process, the principles that have remade education in Harvard College itself. There is, I maintain, a contradiction in principle between the kind of education offered in Harvard College and the kind of education the Harvard admission system fosters in the schools that send up boys to Cambridge. In so far as other colleges are seeking under various plans to give a new unity and reality to undergraduate studies and are yet maintaining schemes of admission based on the old accumulation of points and credits, they, too, exemplify this contradiction in principle between what they are doing themselves and what they are fostering in the schools.

This is what I mean when I say that the colleges undermine themselves. The aims they have in view could be much more fully and successfully achieved if they would not separate themselves from the rest of education, acting as if the principles that apply during the college period could have no possible application in the secondary schools. This contradiction of principle between progressive college plans and antiquated admission systems is no mere logical abstraction. An antiquated admission system helps to build up in the minds of boys and girls, indeed also in the minds of their teachers, and particularly in the minds of the parents who pay the bills for schooling, a false working conception of what education is. Admission under the prescription of points and units in subjects, without any sequential relation between learning in school and learning in college, inevitably makes school work perfunctory and unreal, and useful only for ulterior purposes.

It was to prevent just this effect in college work, the piling up of course-credits toward a degree, that Harvard broke away from the elective system. Why should our system of admission encourage the retention in the schools of the elective system in a form even worse than that in which it once operated in the college itself? The election of school studies with an eye to admission to college is not even "free" election, by which I mean that it is not even election based on the interests, aptitudes, and ambitions of the individual pupil. It is election based only on a calculation of chances for the accumulation of entrance points. The whole process obscures the actual values of the studies pursued in school. It forces hundreds of boys and girls to waste the golden hours of youth in work that will have, for them as individuals, no valuable fruition whatever, simply because it will never be carried beyond the point at which admission credit for its beginnings or its half-way stages has been granted.

What can anyone say to the ambitious mother who remarks that her son doesn't need, of course, to know any Latin, since he is never going to teach it? One is almost driven to a recital of the ancient myth that of course the boy's four years of Latin have resulted in the training of his faculties. And when a recent college graduate remarks that, after all, the main values of a college education are the social contacts one makes and the interests one develops, what is there to be said except that we need in American education, not only at the college level but from beginning to end, a new and vigorous assertion of the importance of ideas for the guidance of life?

To "maintain standards" in college is important, of course. In the long fight to bring the brute forces of nature and the wild urges of human nature under the control of intelligent idealism, it may be necessary at times simply to fight for standards in a kind of abstract fury. Honest standards at least select those who can probably do college work and those who are presumably worthy of college degrees. But surely in the long run it is a mistake to "maintain standards" by an arbitrary and external insistence on scholarship *qua* scholarship. Inert ideas are the bane of education. The actual content of the student's mind as he acquires that content in school or college ought either to have living value then and there or to have the clear promise of a value that will accrue in due course of time—a real value in the content itself, not merely in its use either in getting into college or getting out of it.

This seems to me to mean that if we are to try to give full reality and significance to studies pursued in college, the great reform typified by the General Examination must be spread in principle to cover admission. Until this is done, I can not rid myself of the impression that the colleges, through their system of admission, are undermining their own structure. But more than this, the colleges have thrown away a magnificent opportunity for educational leadership. Through their requirements for admission they have heretofore exerted an influence on secondary education chiefly negative and restrictive. School men have quarreled with the colleges about points in this and points in that, and the colleges have developed a testy academicism in maintaining their requirements. They have even asserted that if the schools would only show some genuine leadership, the colleges would never stand in their way, but that all this guerilla warfare as to points was only a bother. Yet they have not always met constructive school leadership with generosity—witness the attitude of some colleges toward progressive schools and in particular the Harvard attitude toward the Pennsylvania experimental curricula. The fact is that school men, even with the help of students and teachers of education (barbarians themselves!), have not been able to get certain college authorities to meet them in a fair effort to think about secondary schooling in those same terms of reality and value which college authorities have used in working out the recent advances in college education. School men have been foolish—and they have looked foolish—in their constant complaints about college requirements. It is not that the colleges have erred in being stiff and specific in their insistence on the study of certain subjects by those who are to be admitted. The root of the trouble lies in the prescription of these subjects in artificial units chosen merely for administrative convenience or to satisfy special interests. There has been no meeting of minds. The school men have been kept in the position of harried and complaining servitors. The college authorities have brought to the problem no constructive interest. They have been content to hide behind a wall of "points." The important thing is not to decide whether College Board Examinations or some other means or combination of means will predict college success most effectively—indeed, Professor Crawford and others have given us final conclusions on that matter anyway; the important thing is to decide how admission may be handled so that secondary education as well as college education may be—*education.*

IV

With full recognition of the fact that I shall be repeating myself at certain points, let me offer now a connected but still somewhat general statement concerning the reform that seems to me desirable in our program of admission. In this exposition, I shall not attempt to insert the qualifications and reservations that must be made if the actual situation is to be truly and fully depicted, nor shall I try to take account of the difficulties that must be met in effecting any substantial and practical change. I wish merely to present a point of view and an argument in general terms as to the direction in which, as I see it, specific changes in the entrance requirements of the colleges ought to look.

The system of admission to college which has hitherto widely obtained and which still obtains in very influential institutions seems to me to interfere with education. I refer principally to what is known as the Old Plan, whereby a candidate for entrance accumulates fifteen points toward admission by taking written examinations in various subjects; but what I have to say applies also, although not quite so obviously, to the New Plan, whereby admission is based on comprehensive examinations in four subjects. It applies even to admission to college by certificate, since certificates of admission are based on credits earned in particular subjects studied in school for certain units of time. Admission to college by points or credits or units is the essence of the traditional plan in any of its forms. I believe the time has come when admission to college ought to be based on considerations which have been heretofore neglected and which are bound to be neglected in any system based on the earning of credits or the piling up of points or the division of subjects into artificial units. I suggest that radical modification should be made in the whole plan of admitting students to college by unit accumulations in school subjects. The college should be interested in results which can not be checked off in units. It should be concerned with something more significant than a set of marks in examinations covering certain parts of unrelated subjects, whether the number of subjects in which the candidate is examined be larger or smaller, and whether the examinations be given by the colleges or by a board which acts for them or by certificating schools. The college should turn its attention to the actual progress of the individual in achieving the substantial and permanent ends of education—in realizing the values of the subjects he studies either in school or in college or in both. This means, in effect, the abandonment of the traditional system of admission.

The traditional system has had in view but one thing—to get proof, usually by means of written examination in subjects, that the applicant is capable of successful work in college. Directly or indirectly this has meant much prescription of subjects in which examinations are to be taken, and therefore much determination by the colleges of the curricula of secondary schools. That the entrance requirements of colleges should have large influence in determining the character and scope of secondary-school work in college-preparatory curricula seems to me inevitable and desirable; but the proper basis for the exercise of this influence—namely, a comprehensive view of the needs and possibilities of education during the whole period from the seventh grade to the end of the college course—does not seem to me to have been attained by those colleges that continue to use the traditional system of admission. It is true, to be sure, that the traditional system has had the effect of maintaining standards. Where it is carried out with vigor it has prevented many incapable students from entering college; and where it has been relaxed without being changed in principle, standards both in school and college have suffered. Yet in its very effectiveness in maintaining standards, the traditional system has had a tendency to make the secondary school in America, both in its college preparatory curricula and in other more general and pervasive ways, a truncated institution—an institution in which little is finished, which wastes time in many beginnings, smatterings, and partial accomplishments, that have slight connection with subsequent work in college, small general educational value, and few outcomes which justify the vast expenditure on secondary education, either in public or in private schools.

My main thesis is that admission by units earned in subjects obscures the real thing that all schools and colleges should be thinking about—the continuous intellectual development of the individual. The *growth* of the student has been forgotten. It is not measured. There is no provision for its continuance. Our admission system, I maintain, should now face sharply about and concern itself not simply with the selection of the best students and not at all with the selection of such students on the basis of single spasmodic performances in special written examinations, but primarily with the abilities of students as revealed by the complete record of their intellectual and general development and with the connection between what they learn in school and what they are later to learn in college.

V

Concretely, what would happen if that were done? Would all entrance examinations have to be abandoned? Would colleges be thrown back on admission by certificate? Would they be obliged to accept applicants whose studies in school had been entirely unorthodox, haphazard, or scrappy? Is a rational admission system one in which anything counts, from farm mechanics to physics, from typewriting to trigonometry?

The first step toward rationality in the admission system seems to me to be the abandonment of counting altogether. It is not the unit taken that matters, even if an examination attests that the unit "took." Getting in by inches is the root of all evil in the prevailing practice. Merely to "liberalize" requirements by counting whatever the school can teach or the pupil learn is not important. It is not irrational to insist on proof of certain abilities or knowledge of certain subjects, provided that in each instance a case can be made for the specific requirement in terms of the actual value of the developed ability or the acquired knowledge. But the case must be made not in terms of a supposed disciplinary effect on the mind of the student. It must be made in terms of the student's substantial mastery of a tool of learning (e.g., a language), or of some approach to such mastery, which will be carried to completion in college; or, similarly, of some command, or an approach thereto, later to be completed in college, of a connected system of facts, standards, methods, and conceptions such as those of science or of history. Specific requirements cannot be justified if they are framed in terms of bits of subjects which have no value except as admission "counters." Introductory courses, orientation courses, and courses offered for their value in educational guidance ("try-out" courses, so called) have their place in schools, and the colleges must take the risks of educational trespass when their requirements prevent the schools from including such courses in their curricula; but in so far as the colleges decide (by agreement with the schools as to the substantial values involved) on requirements in terms of specific subjects, they ought to be concerned with abilities and bodies of knowledge developed to the point of usefulness in college or to the point at which the college intends to carry on their development. The realities of education are not units, points, or credits, but the abilities, ideas, and interests of students. It is evidence of the development of such abilities, ideas, and interests, with full recognition of what the school has done and what the college is prepared to do to bring that development to final fruition, that should be the center of attention in the process of admission.

Are there any abilities which can be brought to a definite and relatively final stage of development in the school and measured with some certainty for purposes of admission to college? The ability to read English is certainly such an ability; it can be measured in terms of standards sufficiently exact to satisfy every requirement of the case. The ability to write English is another such ability. No one surely could reasonably object if every college insisted on standard performance in the reading of English and the writing thereof.

What can be said in justification of a similar requirement in a foreign language? Omitting any reference to the accepted place of Latin under the traditional conception of the education of "a scholar and a gentleman," what rational considerations apply to the specific requirement of a foreign language for admission to college? I must confess, in the first place, to a personal conviction that the weighting of language and mathematics in the traditional admission system is unfortunate in that it retards the development of school instruction in natural science and in history and the social sciences. But my plea is not, of course, for a diminution in the point value of Latin or modern languages or mathematics. For I want to get away from point values altogether. If a college is to make any requirement in foreign languages, how can the case for such a requirement be briefly stated? Only, I believe, in these terms—that the student has acquired or will acquire a permanent command of the language as a tool of learning. This means that he can read it well. Such power to read in a foreign language that a student can read with satisfaction is not likely to go to waste in college, nor is it likely to be developed and used without some concomitant development of the power to write the language and to pronounce it reasonably correctly. The point I am making here is simply that any specific admission requirement in a foreign language ought to be in the interest not of a mere beginning or a smattering but of a substantial and valuable acquirement. Colleges ought not to hide in this important matter behind the abstractions of an admission system in terms of points, a system which encourages carrying Latin for four years and then dropping it, French for two or three years, and German for a little while. I am not sure that anyone can make a case for a particular language; yet if a certain college decides that every applicant for admission must be able to read French or German well, or at least be at such a point that with further instruction in college he can read French or German well, I believe most of us would respect such an open and honest insistence on the value of a foreign language as a tool of learning. Indeed, most of us, I believe, can admit that certain colleges may justifiably require, as Amherst does now, substantial achievement in Latin in the school, followed by more Latin in the college. Such a requirement, if the emphasis is not put upon time spent but upon knowledge and power attained, ought to permit the college to achieve for the majority of its entering freshmen some of the real values of the study of Latin. If any college should decide to stand out and insist that two modern foreign languages shall be begun in school, one brought to the point of genuine reading knowledge before admission and the other brought to the same point after admission, again I think we should be inclined to respect the college for its honesty and determination. The trouble with requirements in language, both for admission under the cover of a point system and for graduation from college, seems to me to lie in the fact that such requirements tend toward a mere perfunctory acquaintance with a language and not a useful command of it. That same trouble pursues us in our language requirements for the Master's degree and for the Doctor's degree. Haunted by the possibility that any youngster in the school may later find himself a graduate student with a yearning for a Ph.D., we set up language requirements that pester the great body of school boys and undergraduates without assuring to them all some result that will make it worth while for them to scorn delights and live laborious days.

Goethe's remark about the value of a foreign language is true only of those who really know the language, and of course that means not only power to read it but an actual reading of its literature and an understanding of the social background of the people who speak and write it. If we mean business in language instruction, we ought to drive for this result. I know that something can be said for a bowing acquaintance with a language or with any other subject. But such casual results can be left, I believe, to the interstices of an educational career. In determining the main lines of achievement, which ought to run straight through the break between school and college and be governed by the admission system without being interrupted by it, we ought to consider the end-points of continuous effort, not the picked-up pieces that may enter into the total pattern.

But the definition of requirements in terms of specific abilities, whether carried to the point of relative completeness or to some point at which the college will take over their development, involves difficulties that no college seems to be openly willing to face. Not in English, where it would be relatively easy, nor in a foreign language, where it would be hardly more difficult, nor in mathematics, where it would be harder but still possible, does any college say that what it wants is a showing of sheer power, fully and objectively displayed. Nor does any college say that it will require a showing of general and connected knowledge, over a certain range of subject matter, displayed as a whole, without particular reference to units of study pursued in school. With respect to what may be called the total contents of a mind, as with respect to the systems of communication that a mind can use, the college seems to have no real curiosity. Would the results of a test of general information such as has been developed in the Pennsylvania Study get any attention in the conservative colleges? Yet such a test would serve for selection, in connection with other admission data, fully as well as a limited number of examinations in school units. This possibility is admittedly new, the instrument admittedly in the stage of development. But I am slightly pessimistic as to the reception of even the most triumphant proof that a test of general knowledge is a valuable selective agent for admission to college. For to give up units and to leave the schools wholly free to work toward a general and substantial end—the grasp of certain major conceptions and principles in literature, history, the social studies, and science, with an ordered body of fact behind them—is to interfere with vested interests. When requirements are stated in units, Latin can be protected, mathematics can be retained at an irreducible minimum, modern foreign languages can ask for their just share. Instead of being allowed to direct their efforts at the building up of a connected body of ideas, the schools must aim at doing certain things half way which will never afterwards be carried forward but by chance. Also, they must work disconnectedly. Mathematics can be taken in grades IX and X but must be dropped in grade XI so that a unit of history may be prepared. A general information test may not be the way out—I should defer on that point to the judgment of Dr. Learned and Dr. Wood and their co-workers—but units seem to me as pernicious in so-called "content-subjects" as they are in "tool-subjects." If we can give General Examinations at the end of a Collegiate Division or for the A.B. degree, can we not give a Preliminary General Examination for admission to college? The realities are the same at any stage—power over tools, grasp of facts and ideas.

A generalized requirement in terms of concentration and distribution or of a major and minor, as in the University of

Chicago requirement, seems to me the best thing we have on the books. No one has arisen to say that the lack of specific requirement in terms of units brings to the University of Chicago students who are ill prepared for college work. The Scholastic Aptitude Test, the Thorndike Test for College Entrance, and the many plans which stipulate some standing in class at graduation, are all safeguards against admitting the unfit. At the moment, objective tests in English for power to read and to write, and a generalized requirement of examinations or records to prove spread and specialization, would seem, with the additional data required as to health, character, personality, and intelligence (by score on a test or by standing in class) wholly safe and satisfactory as to selection. The other great consideration, hitherto neglected, namely continuity, can be more easily taken into the account if specific requirements in units are finally abandoned.

But isn't this, after all, only the New Plan? Certainly not in terms of any theory as to the effect of the New Plan in *connecting secondary education with college education.* The experience of Milton Academy and possibly of other schools shows that a courageous use of the New Plan meets with a fine liberality at Harvard, Yale, and Princeton. Yet the New Plan has, I believe, the old inherent fault. In its actual workings, the New Plan still chops off school subjects at a point at which it proves possible and convenient to examine the pupil in what he has done in a selected number of school subjects, without any reference to his progress toward the substantial values they are capable of yielding. The New Plan is so much better than the Old Plan that it is not in the same world of discourse. But it still interferes with education, partly because, in most places, it prescribes in terms of subjects too specifically, mostly because it still centers attention on a pattern of school units, the "standard four years' course," instead of the achievements and acquirements of the student, and finally because it is not part of a general conception of education as a continuing process, overlapping the break between school and college, and pointed at realities instead of credits.

If I have talked about admission as if it could be made perfect in and of itself, without changes in schools and changes in colleges, I have led myself and this audience quite astray. Reform in our system of admission seems to me desirable mainly as a part of a general reform which shall make education real and continuous throughout. This is the hope that lies in the General Examination at Harvard and elsewhere, the Honours Plan at Swarthmore, the Chicago Plan, the work of the Educational Records Bureau and the Cooperative Test Service, and the Pennsylvania Experimental Curricula. When they shall all have borne their fruit, we shall test at the end of secondary schooling and also throughout that period not simply for selection but for guidance, not simply to check off units but to reveal progress in the realization of substantial educational values. Then thousands of students will not spend four years on Latin without going far enough in Latin afterwards to know some Latin. The result in view can not come without the cordial cooperation of the colleges. Here is their great chance to do for education as a whole what they have begun to do for education within their own walls. College authorities cannot stand back and say to the schools, "Well, what do you want? We may give it to you if it does not upset our convenient system of checking up by units." The colleges can not even say, "We will tell you *what* you must teach; you may tell us *how much* you find it possible to teach"—a formula once proposed by a former Dean of Harvard College. The new and necessary attack on this problem must be made by a cooperative effort to relate education in school with education in college, not unit by unit or credit by credit, but with reference to what individual students are and know and can do both before and after the cold bath of admission. For the realities of education are not out there "among the salts and acids of the external world, but in the dim, phantasmagoric chamber of the brain, with the pictured window and the storied wall."

HENRY W. HOLMES,
Harvard University.

The Cooperative Test Service

THE purpose of the Cooperative Test Service, under the terms of the subvention from the General Education Board, is to construct ten or more comparable Forms of examinations in the fundamental subject matters of junior college and senior high school levels, and to make them available to the colleges and schools, one form each year, at the lowest possible cost. The 1932 forms of the tests in the subjects listed below are now available at the prices indicated. Colleges and schools may inaugurate the use of these tests with the assurance that a new comparable form of each will be made available each year about April 15. Some of the advantages of such a series of comparable examinations are that—

(*a*) Individual growth in defined types of achievement can be measured year after year, thus making feasible types of educational guidance and of educational research which would be difficult or impossible with unrelated examinations or with "standardized" tests which exist in two or at the most three comparable forms;

(*b*) Each college, school, or school system that uses these tests may set up its own standards for admission, placement, promotion, certification, and graduation, and maintain those standards uniformly from year to year, and at the same time maintain transfer and advanced standing relations with other institutions on the basis of comparable achievement test measurements;

(*c*) The results of subjective and other local examinations can be made closely comparable from year to year by using the results of the Cooperative tests as a common denominator, thus taking advantage of the best features and minimizing the weaknesses of both types of examinations.

TESTS NOW AVAILABLE

Cooperative English Test, Series 1, 1932, 16 pages, by S. A. Leonard, V. A. C. Henmon, M. H. Willing, University of Wisconsin; W. W. Cook, University of Iowa; D. G. Paterson, F. S. Beers, University of Minnesota. Part I, English Usage, 65 minutes; Part II, Spelling, 10 minutes; Part III, Vocabulary, 20 minutes; total time, 95 minutes.

Cooperative English Test, Series 2, 1932, 12 pages, by M. F. Carpenter, E. F. Lindquist, University of Iowa; D. G. Paterson, F. S. Beers, University of Minnesota. Part I, English Usage and Spelling, 55 minutes; Part II, Vocabulary, 20 minutes; total time, 75 minutes.

(Series 1 includes the Wisconsin Language Usage Test and Series 2 includes the Iowa English Correctness Test. Preliminary evidence indicates that the Wisconsin test is somewhat more difficult than the Iowa usage test. Schools may use one or both of these two series, since they are comparable throughout.)

Cooperative Literary Acquaintance Test, 1932, 12 pages, by F. S. Beers and D. G. Paterson, University of Minnesota. Two hundred multiple choice items on English literature and general literature of the type included in English courses. Total time, 45 minutes. (This test may be considered as Part IV of the Cooperative English Test, but is printed separately for the convenience of those who may not wish to use all four parts.)

Cooperative French Test, 1932, 16 pages, by Geraldine Spaulding and Paule Vaillant, Columbia University. Part I, Reading, 25 minutes; Part II, Vocabulary, 25 minutes; Part III, Grammar, 40 minutes; total time, 90 minutes.

Cooperative French Test for Junior High School, 1932, 12 pages, by Geraldine Spaulding, Columbia University, and Jacob Greenberg, Director Foreign Languages in Junior High Schools, New York City. Part I, Reading 25 minutes; Part II, Vocabulary, 25 minutes; Part III, Grammar, 40 minutes; total time, 90 minutes. Note: The preparation of tests for junior high school levels was not included in the original plan of the Cooperative Test Service. The Junior High School French Test was constructed at the request of cooperating schools, and similar tests in German, Spanish, and Latin are being prepared. These elementary tests may be used in senior high schools for one- and two-semester classes.

Cooperative German Test, 1932, 16 pages, by M. Van D. Hespelt and E. H. Hespelt, New York University; Geraldine Spaulding, Columbia University. Part I, Reading, 25 minutes; Part II, Vocabulary, 25 minutes; Part III, Grammar, 40 minutes; total time, 90 minutes.

Cooperative Spanish Test, 1932, 16 pages, by E. H. Hespelt, New York University; R. H. Williams, Brown University; Geraldine Spaulding, Columbia University. Part I, Reading, 25 minutes; Part II, Vocabulary, 25 minutes; Part III, Grammar, 40 minutes; total time, 90 minutes.

Cooperative Latin Test, 1932, 20 pages, by John C. Kirtland, Phillips Exeter Academy; Ruth B. McJimsey and George D. McJimsey, Columbia University. Part I, Vocabulary, 15 minutes; Part II, Grammar, 40 minutes; Part III, Reading, 35 minutes; total time, 90 minutes.

Cooperative Algebra Test, (Elementary Algebra Through Quadratics), 1932, 8 pages, by John A. Long, University of Toronto; L. P. Siceloff, Columbia University. Total time, 90 minutes. This test has been found useful as a supplementary test for classes that have gone beyond quadratics.

Cooperative Plane Geometry Test, 1932, 8 pages, by John A. Long, University of Toronto; L. P. Siceloff, Columbia University. Total time, 90 minutes.

Cooperative Solid Geometry Test, 1932, 8 pages, by H. T. Lundholm, University of Iowa; John A. Long, University of Toronto; L. P. Siceloff, Columbia University. Total time, 90 minutes.

Cooperative Trigonometry Test, 1932, 8 pages, by John A. Long, University of Toronto; L. P. Siceloff, Columbia University. Total time, 90 minutes.

Cooperative Physics Test, (For High School and College Classes), 1932, 12 pages, by H. W. Farwell, Columbia University. Total time, 90 minutes.

Cooperative American and Modern European History Tests, 16 pages each, by H. R. Anderson and E. F. Lindquist, University of Iowa. Each test requires 90 minutes. These are general tests of chronology, historical personages, historical and geographical terms, and general historical information and understanding of events and casual relations, for junior and senior high school classes. Similar tests in Ancient, Medieval, and English History will be available later.

Cooperative General Science Test, 1932, 8 pages, by S. R. Powers and O. E. Underhill, Teachers College, Columbia University. Total time, 90 minutes. (For high school and college entrance and placement purposes.)

Cooperative Biology Test, 1932, 8 pages, by S. R. Powers and F. L. Fitzpatrick, Teachers College, Columbia University. Total time, 90 minutes. (For high school and college entrance and placement purposes.)

Cooperative Chemistry Test, 1932, 12 pages, by Ellis Haworth, Washington, D. C., Public Schools; S. R. Powers, Teachers College, Columbia University; and others. Total time, 120 minutes. A general comprehensive test for first year college and high school chemistry classes.

Cooperative Algebra Test (Intermediate Algebra; Quadratics and Beyond), 1932, 8 pages, by John A. Long, University of Toronto; H. T. Lundholm, University of Iowa. Total time, 90 minutes.

Cooperative General Mathematics Test for High School Classes, 1932, 16 pages, by John A. Long, University of Toronto, and H. T. Lundholm, University of Iowa. 90 minutes.

Cooperative Zoology Tests for College Classes, 1932, by R. W. Tyler and W. M. Barrows, Ohio State University, and others.

A. Information and Terminology, 90 minutes.
B. Interpretation of Experiments, 45 minutes.
C. Application of Principles, 45 minutes.

Cooperative Botany Tests for College Classes, 1932, by R. W. Tyler, H. C. Sampson, Ohio State University; Palmer Johnson, E. K. Butters, University of Minnesota.

A. Information and Terminology, 90 minutes.
B. Interpretation of Experiments, 45 minutes.
C. Application of Principles, 45 minutes.

Advanced Reading tests in provisional form in French, German, and Spanish for college classes will be available in December, 1932.

Tests for college classes in Economics, Government, Sociology, General Mathematics, Advanced Algebra, Analytics, Calculus, Physics, Chemistry, Geology, and Elementary Astronomy are in preparation, and will be announced later. A series of general mathematics tests for secondary school classes is in preparation, and will be announced later.

DIRECTIONS FOR ADMINISTERING TESTS

All essential directions for administering the Cooperative tests are on the test blanks, but examiners who have not administered these tests previously should study carefully the booklet of Directions for Administering and Scoring the Cooperative Tests which is sent out with each order.

NORMS

Norms for the Cooperative tests will be published as they become available, and will be revised from time to time as additional data become available. The English, French, German, Spanish, and Latin tests are designed to cover the whole range of achievement from the ninth grade in high school through the sophomore year in college. Norms will be provided for each of these classes, and as soon as possible for each semester class in the foreign languages.

PRICES

The policy of the Cooperative Test Service is to furnish tests at the lowest possible price consistent with the production of a continuing supply of comparable tests, the fundamental purpose being to promote widespread, continuous, and systematic use of comparable measurements in high schools and junior colleges. In accordance with this policy, discounts will be allowed in accordance with the number of tests desired in each order.

The basic prices are as follows:

20-page tests	6c per copy
12- or 16-page tests	5c per copy
8-page tests	4c per copy

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200 or more	10% from basic price
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For the convenience of organized regional or state testing programs, and for the reduction of shipping and other costs, it is the policy of the Cooperative Test Service to permit the tests to be printed locally under a suitable licensing arrangement. The Cooperative tests are copyrighted and may not be printed in whole or in part except by written agreement.

Sample copies of all tests, 10 cents each; table of norms for each test, 10 cents each, scoring keys, 15 cents each.

All orders should be addressed to the Cooperative Test Service, 500 West 116th Street, New York City.

Authors of the Cooperative Tests. In this brief announcement only the principal and immediate authors of the tests are mentioned. Acknowledgments are hereby made to the large number of scholars who have collaborated in various ways in the production of the tests. More particular acknowledgments will be made to these generous collaborators in the Cooperative Test Manual now being prepared.

The 1933 College Sophomore Testing Program

THE Advisory Committee on College Testing is glad now to announce for May, 1933, an improved and enlarged battery of achievement tests for sophomores. A series of tests adapted for sophomore and other college classes prepared under the direction of the Cooperative Test Service will be available early in 1933. We have selected this series because colleges which participate in the 1933 program may be assured of a new and comparable set of tests each year for several years, thus making possible the study of growth and the establishment and maintenance of standards in individual colleges.

The Tests. The battery of tests provided by the Committee includes five parts, but individual colleges may reduce or expand the battery in accordance with local needs. From the following list of tests each college may make up its program. The arrangement given here is only suggestive.

First Session: 1. English, including Usage, Spelling and Vocabulary; 95 minutes.
2. Foreign language (one of French, Spanish, German, Latin); 90 minutes each.

Second Session: 3. General Culture, including sections on Literature, Social Studies, and Fine Arts. 3 hours.

Third Session: 4. General Science. 1 hour.
5. General Mathematics. 2 hours.

Cost of the Tests. The Committee estimates that the cost of all five parts of the test combined will be not more than twenty-five cents per student tested, and very probably not more than twenty cents. This estimate is based on the assumption that not less than 20,000 sets will be ordered by March 15, 1933, when the tests must go to press. If larger numbers are ordered, the saving in printing costs will reduce the charge. The cost to colleges that use only parts of the test will be proportionately reduced. *The estimate does not include shipping charges.* The low cost is made possible through funds supplied to the Cooperative Test Service for preparing tests; the tests are then sold on a non-profit making basis.

Scoring the Tests. Scoring keys and detailed directions for scoring will be furnished with the tests so that each college may score its own tests. The Committee will, however, provide scoring service at cost plus shipping charges for colleges desiring such service.

Collating the Results. The Committee will collate the results from all participating colleges, and will publish a brief résumé in the fall of 1933 similar to the report of the May, 1932, testing program (EDUCATIONAL RECORD, October, 1932). Forms for reporting results to the Committee will be furnished with the tests. These reports will be considered strictly confidential.

Testing Other Classes. While the Committee is emphasizing the value of a general examination at the end of the sophomore year as a means of enabling the colleges to give students better guidance regarding work in the senior college, the value of such an examination for freshmen, juniors, and seniors and all transfer students is recognized. Since new comparable forms of the examination will be available each year, the Committee recommends to each college careful consideration of the advantages of inaugurating a program of annual testing, beginning with all students in the freshman class in May, 1933. Such a program of annual testing of the same students, with the use of a cumulative record similar to that recommended by the American Council on Education, would lay a promising foundation for the study and growth in individuals, and for the continuous, systematic, constructive guidance which the colleges have long desired to give their students. A minimal program for this purpose should include at least tests in English, foreign languages, general mathematics, and general science.

Vocational and Professional Interest Tests. The Committee calls attention to the recent improvement in the method of scoring the Strong Interest Test. The method promises to reduce the present cost of using this valuable guidance test by approximately one-half. The new scoring device will probably become available in several scoring centers in the spring of 1933. Those who are interested should write directly to Professor E. K. Strong, Stanford University, Palo Alto, California.

Date of the Tests. It is expected that the sophomore tests will be given by all colleges during the first week in May. Colleges preferring another date should write to the secretary of the Committee, F. S. Beers, 217 Administration Building, University of Minnesota, Minneapolis, Minn.

Final detailed directions will be sent to all participating colleges in good time.

ADVISORY COMMITTEE ON COLLEGE TESTING

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The N.R.A. and the Schools

WHAT can schools do to promote the President's recovery program? That they are eager to know is evidenced by the number of letters of inquiry on this subject recently received at the national headquarters of educational associations. Some institutions were so eager to find out that they sent representatives to Washington for the purpose. These letters and these representatives asked both for information concerning the policies of N.R.A. toward educational institutions and for suggestions as to how they can best help promote the program.

So far as institutions under public control are concerned, the first of these questions is easily answered. All Governmental agencies are exempt from the provisions of N.R.A. Efforts by individuals to secure a similar official ruling with regard to institutions under private control made little progress. Therefore an emergency committee was quickly organized under the auspices of the American Council on Education to push the question further. Its members are: Cloyd H. Marvin, President, George Washington University, *Chairman;* Rev. George Johnson, Secretary, National Catholic Welfare Conference; Robert L. Kelly, Executive Secretary, Association of American Colleges; Joseph H. Saunders, Chairman of Board of Trustees, National Education Association. After several weeks of intensive work on the part of its chairman, the committee secured from N.R.A. the following official ruling:

> "That schools, colleges, universities, churches, hospitals, and charitable institutions supported by public subscriptions, not operated for profit, except so far as they may be engaged in the operation of trade or industry, need not come under the provisions of the National Recovery Act."

This ruling is important because it recognizes that nonprofit educational and welfare institutions under private control have the same status as have publicly controlled institutions with regard to N.R.A. It further recognizes implicitly the necessity of keeping all such institutions free from mechanical regimentation if they are to make their unique contribution to the creation of the new industrial civilization that is now in the making. In this matter schools have a responsibility that is peculiarly their own.

The second of the questions on which schools are seeking advice, namely, how they can best promote the national program, every institution should answer for itself. Local conditions and circumstances vary so widely that no one answer will be right for all. There are, however, three general features of the recovery program that suggest fundamental procedures which any institution may well follow in working out the details of its own specific program.

The first significant feature of the new deal is the liberation of the executive branch of the federal government from a number of legal restrictions that made any constructive action in violation of traditional habits a practical impossibility. In one hundred days the Congress, with full sanction of public opinion, vested in the President more authority than has ever before been granted to any chief executive in time of peace. He is now free to make experiments. And he's doing just that.

The second significant feature of the recovery program is the concentration of the energies of the new administration on putting men to work. The Conservation Camps, the Public Works Board, the Agricultural Adjustment Administration, and the N.R.A. are all pulling together to that end. Profitable employment for everyone who wants it is the immediate practical objective of the recovery program.

The justification for this massed attack on unemployment is fairly obvious. In an agrarian age with unlimited land such as we once had, any able-bodied worker can always wrest a livelihood from Nature by his own independent labor. But during the past two generations the developing industrial order has changed all this. People swarm in cities. They are interdependent. Their livelihood depends on wages. They must get remunerative jobs in the industrial system or perish.

By thus permitting the industrial organization to supplant

Nature as the immediate source of livelihood for three-fourths of the population, society has assumed the responsibility of seeing to it that everyone has at least as good a chance as he had in the agricultural age to earn a living by productive work. That is the price we must pay as reparations for our conquest of Nature.

In recent years the industrial revolution has advanced so quickly and quietly that few in America have yet grasped this fundamental fact. Even during the hectic years of so-called prosperity from 1922 to 1929 unemployment was steadily increasing because of technological advance. Yet little heed was given to that most significant trend. Four lean years of suffering have helped us get its social meaning. We understand better how unemployment recruits the ranks of bootleggers and racketeers. We see how much that seems sinister in politics results from fear of losing jobs. We know that much of the human exploitation in industry is endured because it is less fearful than having no job. Clearly, unemployment is the crucial practical problem of the present social order.

The third major feature of the recovery program that is suggestive to schools is the nature of the relationship which it establishes between the Government and the people. Everywhere there is frank recognition of the fact that final responsibility for the result rests with the people. The government did not formulate codes of fair practice. It invited the people to do so. This invitation was addressed not to the people in general but to trade associations each of which is engaged in some special aspect of public service. The codes therefore are not vague expressions of noble aspiration. They state what the majority of each group agree is fair practice in every practical detail of their daily operations. If the findings of the group appeal to the President as fair and just, the code becomes binding on all engaged in the business for which the group speaks. The responsibility for maintaining the code then rests with the group. The government merely reserves for itself the responsiblity of helping the group carry out the code in cases where police force is necessary to secure cooperation.

During the past fifteen years many experiments have been made to develop ways and means for perfecting this type of practical relationship between government and the people. The principle involved in it is known as the principle of decentralized responsibility with centralized control. The N.R.A. program is essentially a series of bold experiments designed to find out what particular features of each specific activity should be centrally controlled and how they should be controlled in order that individuals and groups may have maximum responsibility and freedom in conducting their own affairs. So successful have been the experiments in which responsibility has been really decentralized and central control made scientific rather than autocratic that the principle is rapidly coming to be recognized as a new basic principle of democratic operation.

To educational institutions these three are the most significant features of the opening act of the recovery program. The three corresponding steps in the field of education are: (1) Liberate schools, teachers and pupils from those traditional regulations that restrict free experimentation and the learning process; (2) See to it that everyone is profitably employed while at school; and (3) Transfer the responsibility for achievement from the teacher to the learner so that responsibility for learning is truly decentralized and centralized control is truly scientific. Doing these three things supremely well reveals the spirit and method of the new deal in action. Nothing that schools can do helps more effectively to enlighten the public and promote the success of the national recovery program.

For many years many schools in many places have been experimenting, trying more fully to realize in practice the educational implications of these three fundamental features of the recovery program,—employment, liberty, responsibility. Great impetus was given this enterprise over thirty years ago by Dewey's famous statement: Education is not preparation for life; it is life. But all these experiments have been hampered, some more, some less, by perfectly respectable academic traditions. So serious has been this handicap in some cases that dynamic improvements in schooling, well designed to keep those in school more profitably employed, like vocational training for example, have been driven into competition with the regular schools. Enmity has developed instead of cooperation. And we, the people, have had to pay dearly in dollars and many children have often been unprofitably employed because of this bondage to tradition and habit.

Every school that would really support the national recovery program may well begin by following the example set by the last session of Congress and liberate school executives, teachers and students from the unnecessary restrictions of habit and tradition. The way is being cleared for doing this. For example, the Committee on Standards of the North Central Association reports that it is about ready to recommend the abandonment of many of the ancient mechanical requirements for accrediting in order that every institution may be more free to define its own objectives and perfect its own program for reaching them. Honors courses and promotion on the basis of achievement are demonstrating the beneficial results that may be achieved by intelligent liberation of responsible students from academic requirements.

The way is also well prepared for educational institutions to push forward on the second great feature of the recovery program,—more profitable employment. More effective methods of helping pupils acquire skill in the three R's and other school subjects have been worked out and put into general practice. The techniques of testing have been improved, until testers now claim they can produce valid tests for rating relative achievement of almost every result which teachers will specifically define. New methods of defining desired results in specific terms, new interest tests, psychological examinations, personality ratings and record forms are now available. Any school that wants to find out to what extent its students are profitably employed in any particular class activity can procure or develop testing instruments appropriate for its purpose.

Along with more skillful production of such measuring instruments has come increasing recognition of their value.

Now the testers tell us that their tests are proving more useful as instruments for educational guidance than for ranking students in the order of proficiency in particular school subjects. They reveal what sort of things each student does well as well as the things he does badly. Emphasis can then be given in each student's program on things he does well rather than on those he does badly. When this is done, he will be more profitably employed in school than if he is driven through a set curriculum of traditional subjects many of which he does not get at all.

As to the third suggestive feature of the recovery program, experience is showing that when centralized control is so exercised that students are liberated and profitably employed in school, responsibility for learning is spontaneously assumed by the students, and the per capita costs of schooling decrease.

Some schools began experimenting along the lines here suggested long before the recovery program was launched. A recent example is the General College at the University of Minnesota. Under the traditional system three or four hundred freshmen were annually "weeded out" there because of failure to measure up to traditional academic standards. That flagrant waste of youthful energy and of public money at last so arrested the attention of the faculty that it voted to liberate from scholastic prescriptions those students who were not profitably employed in the standard academic courses. They then did the best they could with the facilities they had to make each student's work profitable to him, with the result that many a one assumed responsibility for his own learning and the per capita costs of instruction decreased. Reports on this experiment in Minnesota and on other similar experiments in Nebraska and Oregon were published in the July number of the EDUCATIONAL RECORD.

Efforts to make schools thus meet the challenge of unemployment place them squarely back of the national recovery program. Then government, industry and education will all pull together to achieve the common objective,—profitable employment for everyone.

Participation in this enterprise makes the schools official agencies, ordained and established by an industrial society, for keeping thirty million—one quarter—of its members profitably employed developing the greatest of all our natural resources, the character and the latent skills of the people. And the people of Minnesota, for example, or of any other state, most certainly will not permit an institution that effectively renders this priceless service to perish for lack of adequate support.

Finally, this partnership of education with government and industry for meeting the crucial social problem of the day gives the schools their utmost chance to play a part commensurate with their powers in creating the new industrial civilization that is in the making.

C. R. MANN.

September 25, 1933.

The Study of the Past, Its Uses and Its Dangers[1]

FOR each succeeding generation, the problem of education is new. What at the beginning was enterprise, after the lapse of five and twenty years has become repetition. All the proportions belonging to a complex scheme of influences upon our students have shifted in their effectiveness. In the lecture halls of a university, as indeed in every sphere of life, the best homage which we can pay to our predecessors, to whom we owe the greatness of our inheritance, is to emulate their courage.

In allusion to the title of this address—"The Study of the Past, Its Uses and Its Dangers"—I may at once say that the main danger is the lack of discrimination between the details which are now irrelevant and the main principles which urge forward human existence, ever renewing their vitality by incarnation in novel detail.

THE PRESENT A TURNING POINT IN WESTERN CIVILIZATION

It so happens that the first five and twenty years of the existence of the Harvard Graduate School of Business Administration exactly coincides with a turning point in the sociological conceptions of Western Civilization. Here, by the term Western Civilization, I mean the sociological habits of the European races from the Ural Mountains on the boundary of Asia passing westward halfway round the world to the shores of the Pacific Ocean; that is, from 60° East Longitude to rather more than 120° West Longitude.

If you keep to the northern temperate zone, in every country that you can pass through in this long journey, you will find some profound agitation, examining and remodelling the ways of social life handed down from the preceding four hundred years. This agitation as a major feature in social life is the product of the past twenty-five years. Of course this unrest has its long antecedents, but within this final short period the disturbance has become dominant. Undoubtedly, something has come to an end.

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[1] Address delivered at the twenty-fifth anniversary of the opening of the Harvard Graduate School of Business, June, 1933.

It is also worth noticing that the center of disturbance seems to lie within each country. We are not dealing with the repercussion of a revolution with one local center. In Russia there has been a revolution because something has come to an end. In Asia Minor the Turks are recreating novel forms of social life, because something has come to an end. Throughout Central Europe, every nation is in a ferment, because something has come to an end. With one exception in the larger nations of Western Europe, Italy, Spain, Germany, England, there is a turmoil of reconstruction, because something has come to an end. The one exception is France. In that country, the internal motive seems to be absent—perhaps fortunately for her. But, anyhow, the comparative absence of any feeling of the end of ways of procedure explains a certain inability to penetrate instinctively into the springs of action of her neighboring nations. For the rest of Europe, something has come to an end; while France is prepared to resume the practice of traditions derived from Richelieu, from Turgot, from the French Revolution and, above all, from her incomparable craftsmen.

When in this survey we cross the Atlantic and come to America, I do not think that there is exaggeration in the refrain that something has come to an end. We stand at the commencement of a new thrust in sociological functioning, and this novelty is of supreme importance in respect to the education of our future leaders in business administration. Do not misunderstand me. In each nation we all want to continue the aim at our old ideals. We can only preserve the essence of the past by the embodiment of it in novelty of detail. I will anticipate the argument by stating that the best feature in the past was the sturdy individualism fostered by the conditions of those times. I am here referring to the last two centuries in the life of America, of England, and of

Continental Europe. Why I have drawn attention to the universality of the present sickness is to draw the conclusion that the remedy is not to be found in the adjustment of some detail peculiar to any one nation. In each nation there will be details of change peculiar to it, and between nations there will be differences of proportion. But we are not likely to recognize the necessary group of details unless we have some grasp of the general character of the disease.

THE PRECEDING TREND FROM MEDIAEVALISM TO INDIVIDUALISM

What has come to an end is a mode of sociological functioning which, from the beginning of the sixteenth century onwards, has been slowly rising to dominance within the European races. I mean that trend to free, unfettered, individual activity in craftsmanship, in agriculture, and in all mercantile transactions. The culmination of this epoch, with its trend still in this direction, can be roughly assigned to the stretch of time from the middle of the eighteenth century to the middle of the nineteenth century. During that hundred years the populations in Europe and America suffered many evils from want, starvation, and war. These evils have always afflicted mankind in the mass. Within this period one essential quality stimulated all sociological functionings.

That quality was hope—not the hope of ignorance. The peculiar character of this central period was that the wise men hoped, and that as yet no circumstance had arisen to throw doubt upon the grounds of such hope. The chief seats of economic and of general sociological speculation were in France and Great Britain. The realized trend towards individualism, and away from mediaevalism, had vastly simplified the problem of constructing a social theory which should correspond to the practical ideal of civilized life when relieved from the madness of its traditional rulers, kings, priests, and nobles. For nearly three hundred years before the middle of the eighteenth century, a continual process of simplification in practice and in theory had prevailed. Feudalism was in full decay; the complex interweaving of church authority with secular government was steadily vanishing. Society could be conceived as functioning in terms of the friendly competition of its individual members, with the State standing as umpire in the minority of instances when there occurred a breakdown of these normal relations.

Primarily this competition of activities concerned the production of material goods for the support of physical life. As to other values, the later formula of "A Free Church in a Free State" sufficed. There the word "Church" suggests religion. But it was in practice extended to all organizations for the supply of every variety of nonmaterial values, religious, aesthetic, moral, including the natural feelings of human affection. I am endeavoring to sketch to you the perfect doctrine of an individualistic society, which was naively presupposed in sociological theorizing from the midst of the eighteenth century to that of the nineteenth. The doctrines were never realized in their full purity. But all social progress was in the direction which they indicated. These doctrines were more perfectly realized in America than elsewhere. But they also admirably fitted themselves to the needs of the commercial middle classes in England, France, and wherever in Europe this middle class was a chief factor in the social life. The American Revolution and the French Revolution were dramatic incidents arising from the acceptance of this sociology. The reconstruction of Europe after the Napoleonic Wars was guided by it. Also, it was evidently the fact that life was healthier, finer, more upstanding, in proportion to the dominance of this social individualism.

In respect to this doctrine, where do we stand today? I will not quote from any theorist indulging in brilliant speculation. I will take a sentence from the editorial page of one of the leading Boston newspapers, in its current issue, which has been placed by my side as I write. Here is the judgment of this organ of Boston commercial opinion: "Whether we fancy it or not, we are in the midst of a revolution, so far as concerns the relation of the individual to the Federal Government."

Evidently something has happened. The pure milk of the word of the sociological gospel, perfected in the late eighteenth century, has gone sour.

Undoubtedly, during the central period the Gospel of Individualism was working well wherever it was tried. But only in North America was it ever the wholly dominant fact. In Europe, it always had the aspect of a new mode of sociological functioning gradually superseding the relics of an antecedent order. This older layer of law and custom had somewhat the air of a deposit of rubbish, in process of removal. Perhaps this aspect was partly a mistake. The relics of the older order may have been providing for the realization of a diversity of values which the pure practice of the new sociology would have left unsatisfied. I will return to this point later.

In America very special conditions for human life were at that time in full operation. An empty continent, peculiarly well suited for European races, was in process of occupation. Also that section of these races which felt the urge towards that type of human adventure had freely selected itself to constitute the American population devoted to this enterprise. Accordingly, in America this epoch exhibits a wonderful development of sturdy independence, with the individual members of the population freely carving out their own destinies. This is the Epic Epoch of American life, and after the initial struggles of small beginnings it had a wonderful central period of about a hundred and fifty to two hundred years. It was a triumph of individual freedom, for those who liked that sort of opportunity. And the population was largely selected by its own or its ancestral urge towards exactly that sort of life. Indeed, the evil side of the survivals of feudalism in European life is illustrated by the bitter feelings which lingered amid the recollections and traditions of the American population. This episode in human existence, when individualism dominated American life, cannot be too closely studied by sociologists. It is the only instance where large masses of civilized mankind have enjoyed a regime of unqualified individualism, unfettered by law or custom.

NEW FORCES AT WORK—THE PASSING OF INDIVIDUALISM

From the middle of the nineteenth century, new forces have been at work, and gradually the situation both in Europe and America has been changed. Up to that time, for nearly two centuries human progress had been identified with the advance of individualism. In England, the Industrial Revolution had been in operation for about seventy years, and in America and Continental Europe for a somewhat shorter period. Its first effect had been to promote the sturdy individualism of the middle classes. It enriched them and stimulated their energy. It destroyed the decaying elements of the past. About a hundred years ago two Englishmen were leaning on the balustrade of a railway bridge, watching a railway train pass under them. This was a novel sight in those days. "It is an ugly thing," said one of them, "but it is the death of Feudalism." The speaker was a strong advocate of the liberal individualism characteristic of that epoch. He did not foresee that in another two generations the new mechanism would send the then existing Individualism into the same grave with the old Feudalism.

Of this trilogy, Feudalism, Individualism, Ugliness, today the Ugliness alone survives, a living threat to the values of life.

The recent phase of modern industrialism has been produced by a change of scale in industrial operations. One of the dangerous fallacies in the construction of scientific theory is to make observations upon one scale of magnitude and to translate their results into laws valid for another scale. Almost always some large modification is required, and an entire inversion of fundamental conceptions may be necessary. For example, on a large scale of observation there are bits of matter, such as rocks, tables, lumps of iron, solid, resistant, immobile. On another, microscopic scale, there are a welter of molecules, in ceaseless activity and each molecule only definable in terms of such activity. The physical science of the two preceding centuries made exactly this mistake. It naively transferred principles derived from its large-scale observations to apply to the operations of nature within the minute scale of individual atoms. I suggest that our sociological doctrines have made the same error in the opposite direction as to scales. We argue from small-scale relations between humans, say two men and a boy on a desert island, to the theory of the relations of the great commercial organizations either with the general public or internally with their own personnel. In any one corporation we may have to consider tens of thousands of employees, hundreds of executives, scores of directors, scores of thousands of owners, and a few controlling financial magnates in the background. I am not saying that such corporations are undesirable. That is not my belief. Indeed, such organizations are necessary for our modern type of civilization. But I do say that observations of the behaviors of two men and a boy on a desert island, or of the inhabitants of a small country village, have very little to do with the sociology of our modern type of industrial civilization.

In any large city, almost everyone is an employee, employing his working hours in exact ways predetermined by others. Even his manners may be prescribed. So far as sheer individual freedom is concerned, there was more diffused freedom in the City of London in the year 1633, when Charles the First was King, than there is today in any industrial city of the world.

It is impossible to understand the social history of our ancestors unless we remember the surging freedom within the cities, of England, of Flanders, of the Rhine Valley, and of North Italy. Under our present industrial system, this type of freedom is being lost. This loss means the fading from human life of values infinitely precious to it. The divergent urges of different individual temperaments can no longer find their various satisfactions in serious activities. There only remain iron-bound conditions of employment and trivial amusements for leisure. I suggest that one subject of study for our industrial and sociological statesmen should be the preservation of freedom for those engaged in the mass production and the mass distribution which are necessities in our modern civilization. It is a study requiring penetrating insight so as to distinguish between the realities of freedom and its mere show, and between hurtful and fruitful ways of freedom.

My point is that the change of scale in modern industry has made nearly the whole of previous literature on the topic irrelevant, and indeed mischievous. The study requires deep consideration of the various values for human life. I am not suggesting any facile solution. The topic is very perplexing. It involves many branches of psychology—general psychology, industrial psychology, and mass psychology. It involves sociological and political theory. It involves the rôle of aesthetics in human contentment. It involves an estimate of the sense of effectiveness aroused by cooperation in enterprises with large aims. It involves the understanding of physiological requirements. It involves presuppositions, however dim, as to the aims of human life. But above all, and beyond all, it involves direct observation and practical experience. Unless the twentieth century can produce a whole body of reasoned literature elucidating the many aspects of this great topic, it will go hard with the civilization that we love.

THE INCREASING PRESSURE OF GENERAL UNEMPLOYMENT

I now turn to another consideration which cannot be separated from the previous topic. The dangers to freedom are largely cloaked in times of prosperity by the scarcity of labor. In such times, at least the desire for change can be satisfied. If one job does not suit, a man can try another. If the type of work remains the same, at least there is a change of factory, of overseers, and of associates. The real cause for restlessness may lie deeper, but something has happened. Also the scarcity of labor affects the mentality of the management.

In a time of widespread unemployment this outlet for discontent is closed. A man is lucky if he be not on the breadline. There is a very real closing down of freedom for everyone concerned, from the higher executives to the lowest grade of employees. In any industrial district in the world, today it is a grim joke to speak of freedom. All that remains is the phantasm of freedom, devoid of opportunity.

It is therefore of the first importance to have in our minds some estimate of the probable frequency of these periods when there is an excess of labor. In England, where long ago any pioneering period has ceased, this excess of labor is almost normal. Sometimes it is more so, and sometimes less. But for more than a hundred years—indeed from the time of Queen Elizabeth—the out-of-work problem has been always there. There are reasons why this evil should settle on the whole industrial world as a permanent factor in life, unless the great corporations can adapt their mode of functioning. Up to now the problem has been mitigated by the existence of empty continents in the temperate zones. This relief has vanished.

The combination of mass production and of technological improvement secures that more and more standardized goods can be produced by fewer and fewer workers. Here and there there are mitigating causes. But the general fact remains, ever advancing in importance. The issue is unemployment. The proper phrase is "technological unemployment." But you do not get rid of a grim fact by the use of a technical term. The result is that a portion of the population can supply the standardized necessaries of life, and the first luxuries, for the whole population. A portion of the population will be idle, and, as time goes on, this portion will grow larger.

In the second place, the demand for goods grows slack. This is to be expected. For the idle, or the partially idle, cannot afford to be brisk buyers. Thus the full quota of goods for the whole population is not wanted, and so again there is another reason for unemployment.

These two grounds for dullness of trade are often cloaked by other agencies with a contrary effect. They stay, however, permanently in the background, a constant aggravation of any trade depression and a constant provocation of bitter discontent.

THE MISTAKEN POLICY OF MODERN SALESMANSHIP AND PRODUCTION

Beyond these effects, the modern salesmanship associated with mass production is producing a more deep-seated reason for the insecurity of trade. We are witnessing a determined attempt to canalize the aesthetic enjoyments of the population. A certain broad canalization is, of course, necessary. Apart from large uniformities, all effort is ineffective. But all intensity of enjoyment, sustained with the strength of individual character, arises from the individual taste diversifying the stream of uniformity. Destroy individuality, and you are left with a vacancy of aesthetic feeling, drifting this way and that, with vague satisfactions and vague discontents.

This destruction is produced by the determined attempt to force completely finished standardized products upon the buyers. The whole motive appealed to is conformation to a standard fashion and not individual satisfaction with the individual thing. The result must be the creation of a public with feeble individual tastes. There is nothing that they really want to buy, unless the world around them is also buying. This is an admirable condition for mass buying when the times are favorable. But it is an equally effective condition for mass abstention from buying when expenditure is once checked. The stimulus of the individual want for the individual thing has been destroyed. And, after all, individual buyers have to buy individual things.

Thus large oscillations in demand arise from comparatively slight causes. The sturdy individuality of the mass of the public is the greatest security for steadiness in trade. It is this individuality that the great commercial corporations are setting themselves to destroy. Independent individuality of demand is the tacit presupposition of much of the older political economy. Thus, whether we survey the producers or the buyers, we find the same steady decay of individuality. Now, a decay in individuality finally means the gradual vanishing of aesthetic preferences as effective factors in social behaviors. The aesthetic capacities of the producers and the aesthetic cravings of the buyers are losing any real effectiveness. The canalization of the whole range of industry is in rapid progress. Apart from the dangers for economic prosperity, there is in this decay a loss to happiness. Varied feelings are fading out. We are left with generalized mass emotion.

My line of argument up to this point is not the preliminary to an attack on great commercial corporations. These organizations are the first stage of a new and beneficent social structure. My complaint is that in the two or three generations of their existence on their present scale they have functioned much too simply. They should enlarge the scope of their activities. To understand what is required, we should ask why France stands out as a tremendous exception to the general sociological trend. She has preserved the individuality of her craftsmanship and the individuality of her aesthetic appreciations. This is the secret of the undying vitality of the French nation. What I suggest is that the great corporations in various ways should interweave in their organizations individual craftsmanship operating upon the products of their mass production. For example, to take the most obvious of all the aesthetic products in the world today, namely, the dress of women. If you enter a leading Boston store today, you are lucky if you find material illustrating as many as five shades of blue. The other shades are out of fashion. Such is the decree of the business world. Delicate craftsmanship, subtle combinations, individualities of taste, are out of the question. Today the world of woman is restricted to the fashionable blue. Subtlety of taste is ruthlessly stamped out. In this example, the delicacies of craftsmanship are irrelevant to the operations of the great producing firms.

Of course, mass production underlies the modern standard of life. What we require is a close interweaving of the forms of activity, the production of the general material and the perfection of the individual thing. Of course there are all sorts of halfway houses. I can only here state my meaning in crude outline. The great producers and the great distributing corporations should include in their activities the work of craftsmen and designers.

THE NEED FOR ECONOMIC STATESMANSHIP

This concerns another point relating to our present troubles. We are told that the seat of the evil is our distribution of goods. In its more obvious sense this doctrine is certainly wrong. The organization for the delivery of goods to any purchasers could hardly be more perfect, whether we think of the neighborhood of a town, or of the whole of America, or of the whole of the civilized world. What is at fault is that for the majority of people the ability to procure goods depends upon the exercise of some useful activity. But mass production has restricted the quantity of human activity required. Hence a large number of people are unable to procure goods. But, when we look at France, we see that we have wantonly suppressed a very considerable side of human activity, for which large numbers of human beings are admirably fitted. The result is that we have both suppressed the opportunity for self-expression which is so necessary for happiness, and have extinguished the claim of a large section of people upon the goods which lie ready for consumption.

What is defective is not distribution, but the variety of opportunity for useful activity. Thus the interweaving of mass production with craftsmanship should be the supreme object of economic statesmanship. Here by craftsmanship I do not mean the exact reproduction of types of activity belonging to the past. I mean the evolution of such types of individual design and of individual procedure as are proper for the crude material which lies ready for fashioning into particular products.

Also I must avoid another misconception. Nothing that I am saying has any reference to any action now desirable for the rescue of the world from its present state of miserable depression. Such action must be immediate and must therefore presuppose the existing modes of economic activity. I am speaking of the tasks awaiting economic statesmanship during the next twenty-five years. My point is that in our economic system as now developed there is a starvation of human impulses, a denial of opportunity, a limitation of beneficial activity—in short, a lack of freedom. I have endeavored to show that this fault in our system produces in various ways an excess of irritability in the social organism. Whatever system we have, the natural fluctuations of the universe will produce in it ups and downs, from better to worse. But this irritability latent in our present modes of functioning seizes hold of these fluctuations and exaggerates them. These recurrent depressions have been growing more and more dangerous, and are likely to grow worse. In our search for remedies, we must consider the things that cannot be reduced to machinery, things material and things spiritual. Again, the present argument is only a putting together of considerations which have already been developed by others. In fact, much of this discussion is a commonplace of literature. More than a hundred years ago, Southey pointed out the destruction of beauty in the lives of the operatives in the manufacturing districts of England. In the third quarter of the nineteenth century Ruskin was denouncing the absence of aesthetic values in the English industrial system. Both Southey and Ruskin were fantastic and impracticable, but they fastened attention upon a real blot. Relevantly to the present situation, Professor Ames of Dartmouth has expounded with great insight the case for interweaving aesthetic activities in the leisure provided by mechanized mass production. Also at Harvard, Professor Mayo and his band of workers have made a notable advance in the analysis of industrial psychology. In the combination of these points of views, we have the foundation for a new chapter in Economic Statesmanship.

THE EDUCATIONAL PROBLEM

This conclusion has a moral for education. A training in handicraft of all types should form a large element in every curriculum. Education is not merely an appeal to the abstract intelligence. Purposeful activity, intellectual activity, and the immediate sense of worth-while achievement should be conjoined in a unity of experience. Of course, this doctrine must be worked with discretion and in proportion to the other necessities of education. At the latest stage of education, namely, in university life, a differentiation takes place. A large proportion of the students should devote themselves to sheer intellectual training. But in Science, in Technology, and in Art, a large infusion of hand work should be a serious element in the work of a considerable section of the students. My own experience, which is a large one, in the educational requirements of the population of London has convinced me that the sharp distinction between institutions devoted to abstract knowledge and those devoted to application and to handicraft is a mistake. Every university will have its emphasis, this way or that. But I see no advantage in an anxious drawing of an exact line of demarcation. The mass of mankind, including many of its most valuable leaders, require something betwixt and between. Common sense and no abstract theory should dictate what any particular university attempts.

This doctrine is most easily exemplified in the sphere of the fine arts, though, of course, craftsmanship is not limited to artistic production. Industry and art alike will be on a healthier basis when the natural avenue to fine art is through craftsmanship with the cultivation of fine sensibility. In addition to the general design of the mass-made product, there can also be interwoven possibilities of adding individual differentiation to individual things. The finer genius can develop into the specialized artist with his work abstract from all association with other utility.

In conclusion, it is obvious that any blending of a machine-age with a vigorous craftsmanship will require a large co-operation between schools and universities and the great business interests concerned with production and distribution. It will also require the education of the general public. It will require the advice of technologists of all types from engineers to artists. It will destroy much of the sweet simplicity of modern business policy which fastens its attention solely on one aspect of our complex human nature. But, if it can be accomplished, it will add to the happiness of mankind, notably so by stabilizing the popular requirements and widening the area of useful occupations.

ALFRED NORTH WHITEHEAD,
Harvard University.

A Philosophy of Education for Wisconsin

EDUCATIONAL OBJECTIVES

THE character of any educational system is determined by its objectives. The most acceptable idea underlying educational objectives is the growth of the individual so that he will act as wisely as possible in the social groups of which he is or may become a member. Acting wisely in this connection is to be interpreted as acting in such a way that he will make the greatest possible contribution to society and at the same time receive the greatest possible personal satisfaction. These two ends are not regarded as essentially in conflict.

DEMOCRACY

The essential idea in democracy is that of respect for personality—the consideration of people as persons and not as things. If we are to develop in America a democratic society, the school cannot escape partial responsibility. All the relations of the school must conform to this principle in practice as well as in theory. The idea of growth through critical thinking fits in with democracy since it conditions human action upon wise self-expression. The teacher-dominated school does not allow for the freedom necessary for growth through self-expression in a typically social environment. The teacher should make every effort to make the pupils responsible to social forces within and without the school rather than center responsibility in himself. The traditional school is a teacher-dominated autocracy rather than a democracy. The teacher or some force still farther removed from the learner sets the tasks, the standards of learning and conduct, and the teacher appropriates all judicial and executive authority. By the term democratic school is not meant that the school should be administered by the pupils without due respect for society and its institutions, but the school set-up should be such that the pupils can assume all responsibility consistent with other social interests that are in any way connected with the school, and respect for these interests should be recognized through reason and understanding rather than through authoritative control. Only beginnings have been made in the reorganization of the traditional autocratic school to make it more democratic. These are found chiefly in the modern kindergarten and primary grades. We should not preach democracy and continue to practice its opposite in our educational institutions.

INDIVIDUAL DIFFERENCES

There is a wide range of difference in the rates at which individuals develop, intellectually and emotionally. For the same individual also, the rate of growth is neither constant in any one line nor uniform in different lines of educational endeavor. Since an individual develops best when his environment tends neither to accelerate nor to retard his growth beyond the present limits of his native capacity, constant vigilance must be exercised by the teacher in the adjustment of the pupil's educational surroundings. The purpose of differentiating the curriculum is to provide for different child interests and not for different levels of ability. Provision should be made in each curriculum for different ability levels.

THE ATTITUDE OF INQUIRY

One of the basic principles involved in the growth of the human mind is that of critical inquiry. This means open-mindedness, toleration of others' views, deferring judgment and a willingness to alter beliefs in the light of new evidence. School procedures should be controlled by this scientific attitude. In cases where the evidence is sufficiently conclusive to warrant independent action, educational practice should stimulate the individual to act according to his convictions even though they may run counter to tradition or to usually accepted social practice. Present practice, however, should be accepted as the guide until there is a reasonable doubt established as to its superiority to the proposed change. The teacher's attitude, therefore, should be that of inquiry, of problem-solving, rather than that of ready acceptance or of uncritical rejection of new ideas.

CONTROVERSIAL QUESTIONS

The principle of free inquiry is often in conflict with the personal interests and opinions of individuals and groups.

The problem of how far the school can go in the study and discussion of controversial questions is a difficult one. Personal beliefs must be respected but on the other hand we can only find the best solution of our most difficult political, social, and economic problems through both intensive and extensive study and discussion of them. Partisanship has no place in the school but opportunity for free inquiry must be protected.

INTERESTS AS EDUCATIONAL OBJECTIVES

The principle of growth emphasizes the present life of the child rather than preparation for adulthood. Both the direction and rate of the pupil's growth are closely related to his present interests. These act both as cause and as effect. Habits are not consciously formed except on the basis of desire and interest. The school can scarcely serve the child better than by helping him to acquire an assortment of interests which are in line with his native capacities. These interests should multiply and strengthen his social relations as well as his personal satisfactions. They represent, therefore, the basis of his moral life and they furnish the drive that carries him through difficulties to the realization of his desires.

SOME ESSENTIAL FACTORS OF LEARNING

Interest, satisfaction, and success are closely related factors of learning. The motive power of self-directed activity is purpose and interest. When activity is successful, that is, when conscious progress is being made toward a goal, the activity is accompanied by interest and followed by satisfaction. The reverse is also true. The driving power of purpose, the stimulation of interest, and the satisfaction resulting from successful effort are essential factors of learning. Attitudes are, therefore, all important in education. It has been demonstrated that learning takes place more rapidly when the learner knows how well he is succeeding.

It is evident from the preceding statement that only beginnings in learning can be forced from without. Purposes which are self-initiated or freely appropriated create true learning situations. Coercion may and often does produce an attitude of opposition. One of the chief defects of the traditional school is its emphasis on coercion rather than on purpose. Unless outward compulsion is soon replaced by the inner drive of purpose, learning is thwarted and opposing attitudes are developed. These are cardinal principles of the Wisconsin Philosophy of Education.

SELF-DIRECTION NECESSARY IN LEARNING

Artificial or external stimuli may and often do set up the goals and methods of approach, but no critical learning takes place until the individual has accepted the goal as his own and his interest in reaching the goal is constantly stimulated by an understanding of his progress toward the goal. Outside forces may stimulate inside forces to action, but critical learning takes place only insofar as the inside forces become self-directing in their interplay with outside forces in the quest for the objective. Though artificial stimuli, or stimuli not inherent in the goal or the progress toward the goal, may be accepted in a critical educational set-up, the inherent danger in the abuse of these stimuli is so great that extreme care must be exercised to limit their use, especially coercive stimuli, to individual cases where a careful analysis indicates that such stimuli are necessary to obtain a critical educational set-up. Since the method of problem attack is the dominant objective, no educational process can be justified under the above philosophy where the coercive elements are consistently dominant, or where coercion is used when the objective can be obtained through critical practice. Under this philosophy, an educational set-up must be judged solely from the amount of self-directed activity it stimulates in the contemplation of worthwhile problems.

GROWTH AND "THE CHILD-CENTERED SCHOOL"

The philosophy of growth is consistent with the child-centered school if by that term is meant educating the child so to understand his social and natural environment as to make it possible for him to get the highest degree of satisfaction out of his social relations. It is not consistent with the child-centered school if such a school means developing an individual so that he receives satisfaction only when he can make everything in his environment yield to his own desires no matter how unsocial these may be. It is consistent with the society-centered school if this means that the individual is to be brought to understand his relations with his environment in such a way that he lives most fully as an individual when he is living most completely for society. It is not in agreement with the society-centered school if it means to develop in the child a blind indoctrinated slavish adherence to the accepted social customs irrespective of his individual well being.

The characteristics of a child-centered school as conceived in this philosophy are freedom, initiative, activity, interest, and self-expression for every pupil. These qualities are in contrast with those of the traditional teacher-centered school. These new ideas and ideals for the school have grown out of the new educational philosophy and psychology here advocated and are in harmony with them. They have already revolutionized practice in the kindergarten and primary grades and have modified the administration of university graduate schools. It is of the greatest importance that every teacher should study the advantages of the new child-centered school as well as its dangers.

EDUCATION AS ADJUSTMENT

Adjustment is regarded by many educators as the chief aim of education. The institutions of society become the dominant educational objectives rather than individual freedom. There is direct opposition between the ideas of education as adjustment and education as growth through problem-solving. The character of instruction and of the curriculum under one of these aims differs widely from that under the other. The nature of these two concepts is such, however, that they represent the opposite ends of a scale along which human relations move, sometimes approaching one extreme and sometimes the other. The school must continually seek the most satisfactory solution of this age-old problem of individual freedom versus institutional control, the relation of the wolf to the pack, and must fashion its organization and instruction accordingly.

THE PROBLEM OF DRILL

The educational principles here accepted imply that a large part of education consists of problem-solving activities. There is also in the curriculum, however, a considerable amount of skills, habits and informational data useful as tools and means rather than as ends in themselves. In general these tools and skills are best acquired incidentally in connection with their use in reaching some end desired by the pupil rather than by formal drill apart from such use. The difficulty in the latter procedure is to secure, when needed, the transfer or application desired. Common experience indicates, however, that for the sake of economy of time and without too great a violation of the principle of interest, these tools and skills may possibly be taught through formal drill. Such a course is justified only when suitable follow-up tests indicate that the power to use the tool in a new problematic situation has actually been achieved.

TRANSFER OF TRAINING

The nature and possible extent of transfer together with the conditions under which it may be secured must be carefully considered in formulating an educational program. The solution of this problem belongs to psychology which up to the present time has given only a partial answer. It is generally agreed among psychologists, however, (1) that transfer is possible, but not automatic; (2) that the amount of transfer depends on the intelligence of the child, the nature of the learning experience, and the technique of the teacher. This statement throws a tremendous responsibility on the teacher and her helpers who must now determine where expected transfer is lacking and how it may be achieved.

THE SCHOOL AS ONE EDUCATIONAL AGENCY AMONG MANY

The public school is but one of the educational institutions of society. Its functions are limited by its nature and its organization. Constant study should be made to determine what can and should be taught in the school, and what can not. Much of the present failure ascribed to the school is probably due to the fact that it is attempting to secure educational outcomes beyond its power to teach. The school cannot compete, but must fully cooperate with the other educational agencies of the community.

These limitations necessitate a careful selection of the educational factors to be emphasized in the school. Only a limited part of a child's education is directly or indirectly the result of formal school education. The great school of life of which the formal school is only a factor is responsible for the child's education. The school should not try to assume the responsibility for all phases of child education, but that part of it which is vital, transferable, and is not furnished in the desirable degree by any other agency. For instance, the school, on account of the above limitations, can at best be a small factor in the health education of the child. In this education it is limited to assisting rather than taking the lead. On the other hand, in the case of beginning reading, the school must accept leadership because society has no other educational force that will accomplish this very desirable part of the child's education. An analysis of the school's function in the general education objectives is necessary to selection of the subject matter and activities in an effective program of school education.

THE TEACHER TRAINING COUNCIL OF THE WISCONSIN
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Educational Guidance Is Now Possible

EDUCATIONAL guidance is, of course, no new idea. We have had the phrase for years, and long before we had even the phrase many of us understood well enough —as a matter of mere common sense—that the boys and girls or young men and women with whom we were working often needed counsel as to the studies they should pursue, the careers they should choose. All along we have been giving such counsel here and there as we could, and practically all of us can point to a fair number of cases through the years in which students who had not previously found themselves were "guided"—as we should now say—into fields of study which they found congenial and into professions in which they have been serviceable and happy.

But I submit that up to the immediate present most of this counseling has been haphazard in character. It has not been afforded to anything like all our students—only to occasional students in whom, more or less by accident, we "took an interest."

And even with these favored ones our advice has partaken pretty much of the nature of guesswork. We have had to play hunches. We have had to make snap judgments, based on data which were insufficient and much of which we well knew to be unreliable. We were in the position of the physicians of an earlier era, before the medical profession had thermometers and stethoscopes and blood counts and bacteriological examinations. Like them we had to base our diagnoses on superficial symptoms only, and like them we made a terrific number of mistakes—which, protectively, we usually manage to forget, while we remember our lucky successes.

But this situation, my title declares, has now changed, or is now capable of change. In what does this change consist, or how can it be brought about?

The change, or potential change, consists in the present availability of two new measuring instruments in the field of education: the cumulative record card, corresponding to the medical history and hospital chart; and the standardized objective achievement test, comparable perhaps to the blood count or bacteriological examination. These two new instruments, added to the older yet comparatively recent psychological or aptitude test, place us educational physicians in some degree on a level with our modern medical colleagues, if we will but use these new instrumentalities in our schools and colleges as consistently and systematically as the physicians use their modern facilities in clinics and hospitals.

But this so far we have conspicuously failed to do. The cumulative record card, devised by a subcommittee of the American Council on Education and published by the Council, is being used, either in its original form or in variant adaptations, in the Pennsylvania Study,[1] by the Educational Records Bureau,[2] and in a number of scattered schools and colleges outside the spheres of those two organizations. But in a good many of these schools and colleges—even among those under the Pennsylvania Study—the use made of the cumulative records after they have been compiled has been practically nil. The data have been collected and entered—and then the cards have been put away on a shelf to gather dust. The officers of such institutions are, of course, inclined to look upon such records as involving quite a lot of extra labor and expense to no avail. Naturally! Would it pay to take medical histories or to keep hospital charts if the physicians never or seldom looked at them?

The achievement test and the psychological or aptitude test have likewise failed to attain *systematic* use. Of course such tests have been widely introduced in schools and colleges all over the country. In a good many institutions at both the secondary and the collegiate level either a small battery of achievement tests or an aptitude test or both are now given annually to some particular group, usually the departing seniors in a high school, usually the entering freshmen in college; but in a large majority of cases the *individual students* to whom the tests are given are tested *only once*. This procedure is comparable to that of a physician who, caring for a patient over a dozen years, should listen just once to the beating of his heart and then consider that he had no further use for a stethoscope.

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[1] See the *Program for a Study of the Relations of Secondary and Higher Education* (the "Pennsylvania Study"), issued by the Carnegie Foundation for the Advancement of Teaching, 1928; also *Progress Report IV*, published by the Carnegie Foundation, November, 1931; or Max McConn, "The Carnegie Foundation's Study of Secondary and Higher Education in Pennsylvania," *Bulletin of the American Association of Collegiate Registrars*, vol. V, no. 2, 1929, reprinted for distribution by the Carnegie Foundation.

[2] See *Report of the School and College Relations Committee of the Educational Records Bureau*, 1932, published by the Bureau; also Eugene Randolph Smith, "The Work of the Educational Records Bureau," *Progressive Education*, vol. VIII, no. 11 (November, 1931).

It may be granted that the results of a single psychological or aptitude test are better than no record at all of this kind; also that a single objective achievement test percentile is a valuable check on a single subjective grade in the same field or even on a whole series of such subjective grades. But the fact remains that no single test, and no group of tests to be administered on one particular occasion, which we have yet invented or are likely to invent, can give us the basis for sound educational and vocational guidance. For that we need a *series of comparable tests over a period of years*, through which the stresses and accidents of particular occasions may cancel out, and by means of which we may follow both persistent levels and significant changes of capacity, interest, and attainment. In short, we need to use our instruments again and again and to keep our educational history or chart through some substantial interval if we are really to know what we are doing, if we are to give valid and hence useful counsel to young men and women in regard to their studies and careers.

Many of those who are most keenly interested in personnel work and most zealous in using the new tests have apparently failed to grasp the fundamental importance in this business of the long-time case history.

For this failure of understanding there are several fairly obvious reasons. One of these is simply the outstanding validity and value of any good objective test as compared with most subjective grades as currently given and used. This comparatively greater validity and dependability, now thoroughly established and generally recognized, has made even single standardized objective tests a godsend to harassed teachers and administrators in all sorts of promotional crises—in connection with admission to college, placement, ability grouping, assignment for remedial instruction, and the like,—with the result that the tests have been seized upon for such purposes, and have come to be thought of as designed merely for such use.

A second reason for this inadequate conception of the proper use of the new tests undoubtedly lies in our ancient, vicious tradition of snapshot examinations, conceived of as single tests to be given once for all on some duly announced and highly crucial occasion and thereupon "passed" or "failed." This tradition has come down to us from a long past, from Responsions and Moderations at Oxford, from the doctoral examinations of the German and French and Italian universities, clear back to Bologna and Padua; and it hangs over us today in our College Board Examinations, Regents' Examinations, state medical and bar examinations, and the like. Some day we shall learn that the complexities of human growth and attainment and potentiality cannot be thus summarily evaluated through one spasmodic deliverance; but the tradition is centuries old, and it will take decades at least to kill it. Meanwhile its dead hand has operated to pervert the use of new kinds of tests of which it never dreamed.

But there is a third reason, less discreditable to the intelligence of educators, why most of them have thus far failed to make continuous and systematic use, *with the same individual students*, of educational tests; namely, that until almost the immediate present most of these tests have not existed in a sufficient number of comparable forms to support any continuing program of repeated testing of a particular group. This statement is less true of the psychological or aptitude tests than it is of the achievement tests. The Thorndike Intelligence Test for High School Graduates was published more than a dozen years ago in twenty-odd comparable forms; and the Thurstone or American Council on Education College Aptitude Tests have been appearing in annual comparable forms for some time. But on the achievement side, although we have had many dependable tests for a number of years, most of them have existed in only two equivalent forms.[3] It is well known that when any single form of any test has been used as often as twice in the same school it is no longer safe to use it there; either the questions "get out" among the students, or unfair coaching on the part of teachers may occur. Furthermore, no agency has heretofore undertaken to establish and publish the comparabilities of different tests, although it appears that this would be no very difficult or very expensive task. And, finally, in spite of the large number of tests which have been issued,[4] there remained several important subjects regularly taught in the senior high school and the junior college years in which we had no tests at all. It follows that—in the absence of a sufficient supply of comparable forms of particular tests, of published comparabilities among different tests, and in some subjects of any tests at all—it has in fact been impossible, until now, to set up anything like a complete and continuous program of achievement tests and educational guidance.

Until now. What new factor or phenomenon has appeared to change this situation for 1933? The answer is, the development over the past three years of the agency known as the Cooperative Test Service and, still more recently, of several series of comparable tests constructed in connection with certain state testing programs. I shall first describe briefly the purposes of the Cooperative Test Service and then discuss at greater length a few of the state programs.

Most readers will know something of the new organization known as the Cooperative Test Service. For those who may be vague about it, it may suffice to state in a single sentence: that it is sponsored by the American Council on Education; has been subsidized by the General Education Board to the tune of $500,000, to make possible a ten-year program with an annual budget of $50,000; and has been set up in New York City under the directorship of Dr. Ben D. Wood. It must be added, however, that Dr. Wood and his staff in New York City constitute only a small part of the *de facto* working personnel of the Cooperative Test Service; because the Service has enlisted the cooperation of a majority of the leading test-makers of the entire country and also of a considerable group of subject-matter specialists. It has thus become a cooperative service, in fact as well as in name, on something like a nation-wide scale. Among those most active in various phases of the work of the Cooperative Test Service are Professors Henmon of Wisconsin, Kelley of Harvard, Lindquist of Iowa, Paterson of Minnesota, Ruch of California, Terman of Stanford, and Tyler of Ohio State.

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[3] A notable exception is the New Stanford Achievement Test, which became available in 1928 in five comparable forms.

[4] Compare the list compiled by Dr. Clifford Woody, in *Quantitative Measurement in Institutions of Higher Learning* (Yearbook XVIII, National Society of College Teachers of Education), University of Chicago Press, 1930.

But what does the Cooperative Test Service do? Its work is twofold:

First and fundamentally, as stated in its first published announcement of new tests, "The purpose of the Cooperative Test Service, under the terms of the subvention from the General Education Board, is to construct ten or more comparable forms of examinations in the fundamental subject matters of junior college and senior high school levels, and to make them available to the colleges and schools, one form each year, at the lowest possible cost." In other words, the primary function of the Cooperative Test Service is that of a factory for the continuous manufacture, year after year, of the particular kind of scientific measuring instrument known as the standardized objective achievement test. It aspires to serve the science and art of teaching in the same way in which a firm of instrument-makers serves physical science or the science and art of medicine.

By supplying tests in most if not all the academic subjects regularly taught in the senior high school and the junior college years, and by providing comparable forms from year to year, the Cooperative Test Service will obviously overthrow two of the three obstacles cited above as standing in the way of a fairly complete and continuous program of testing and educational guidance. And it has been recently decided that it shall undertake also to overcome the third of these obstacles: that it will establish and publish the comparabilities between its own tests and other achievement tests in common use, thus showing also, of course, the comparabilities among all these other tests.

As a matter of fact, the principal value that may be claimed for the work of the Cooperative Test Service lies in its emphasis on and provision for this point of *comparability.* To guard against possible misapprehensions it cannot be too emphatically stated:

1. That the tests which are being issued by this particular organization are not—of course—to be regarded as being the last word in achievement tests; they must be constantly revised and improved in the light of criticisms, experimental data, and new developments in the technique of test construction.
2. That the Cooperative Test Service—which is organized as an institution "not for profit"—has no desire to have its own tests displace or supersede any other reliable and comparable tests now in use. The Cooperative tests are intended for those schools and programs which have not constructed comparable tests of their own or adopted any other series of comparable tests. Probably the greatest contribution the Test Service will eventually make will be, not its own tests, but the tests it will have stimulated other agencies to make.
3. That there is no thought of having the Service's tests or any other objective tests displace subjective examinations. Rather the availability year after year of these and other comparable objective tests will furnish an instrument for making comparable the results of subjective examinations also, and thus salvaging and enhancing the unique values of the older type.
4. That the Cooperative Test Service will most studiously avoid any interference with research in techniques or with the extension of testing to new fields of subject matter such as may be delimited by progressive schools and colleges.

The second objective of the Cooperative Test Service—or, more strictly speaking, of the Committee on Educational Testing, which, under the Central Committee on Personnel Methods of the American Council on Education, is working with the Cooperative Test Service and with state and university testing organizations—is the wider introduction of testing and guidance programs, and more nearly adequate programs, in schools and colleges throughout the country.

To this end the Committee, with the cooperation of the Cooperative Test Service, the Carnegie Foundation, the Educational Records Bureau, the Columbia University Statistical Bureau, and the International Business Machines Corporation, and with special assistance from Dr. E. F. Lindquist of the State University of Iowa and Dr. G. M. Ruch of the University of California, sponsored the nation-wide College Sophomore Testing Program of May, 1932; in which certain parts of the sophomore test previously used in the Pennsylvania Study were given to 18,134 students in 140 colleges, teachers colleges, and junior colleges, representing 38 states.[5] It is probable that some of these 140 institutions had never before made use of objective achievement tests; accordingly it may be supposed that this program brought the uses and values of such tests to the attention of a considerable group of college teachers and administrators who were previously somewhat unfamiliar with them. In response to many requests, a similar testing program has been offered to the colleges of the country for the spring of 1933.

But, important as the introduction of objective tests and guidance programs in the colleges is, this is clearly less pressing for the immediate future than the setting up of adequate guidance programs in the high schools of the nation; for the obvious reasons (1) that the high schools serve a tremendously larger group, and (2) that educational guidance should always be begun not later than the secondary level—ideally, indeed, still earlier. In most individual cases, in fact, the principal educational decisions—sometimes even vocational decisions—should be at least tentatively made before the end of the secondary period, if serious waste of time and money and serious damage to individual morale are to be avoided.

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[5] The Committee's report on the results of this testing program appeared in *The Educational Record,* vol. 13, no. 4 (October, 1932).

Accordingly the Committee on Educational Testing and the Cooperative Test Service are especially interested, just now, in the high school side of their problem. Here they must plainly work—not, for the present at least, under any nation-wide set-up—but with state testing and guidance organizations or with regional organizations. Accordingly, the Committee and the Service are now engaged in cooperating with and promoting and instigating, wherever they see a chance, *state-wide and regional high school testing programs,* emphasizing high school and college cooperation, and striving in every case for as high a degree of completeness and continuity as may be feasible. And already organized high school testing programs of one kind or another have been undertaken or are about to be undertaken on a state-wide or prospectively state-wide basis in a dozen states, including Alabama, Colorado, Georgia, Indiana, Iowa, Kentucky, Minnesota, Ohio, New Hampshire, North Carolina, Washington, and Wisconsin; to which it seems likely that Delaware, Mississippi, Oregon, and several others may soon be added.

I wish to give some account of some of these actual state-wide programs, but before coming to that it may be worth while, first, to describe briefly an *ideal* state program, as at present conceived by the Committee and the Cooperative Test Service, and, second, to attempt to answer the recurrent (and highly pertinent) question, What is to be the use of the vast machinery of testing which you apparently envisage as about to be set up in all or most of the states? What tangible good is to come out of it all?

For the present an ideal state high school guidance program may be conceived as including:

1. The annual testing, with standardized objective achievement tests, of all pupils in the ninth, tenth, eleventh, and twelfth grades in all the fields in which instruction is regularly given; with the inclusion of standardized psychological or aptitude tests at suitable intervals—perhaps in the ninth grade and the twelfth or the tenth and twelfth—and of such tests

as the Strong Vocational Interest Blank and the Bernreuter Introversion Scales. If and when reliable tests are developed for the measurement of "personality" traits, one or more such tests would doubtless be added.

2. The maintenance of cumulative records, to summarize compactly and graphically each individual student's successive showings in the objective tests and his parallel record in (subjective) school grades; with the addition of strictly factual notes on such items as physical and mental health, family background, financial situation, study conditions, vocational experiences, unusual accomplishments, reported interests, educational and vocational plans, and the like.

3. The provision of adequate counseling service, either through partially specialized personnel officers (sometimes called deans of boys and deans of girls), or through "home room" or study room teachers, or other teachers chosen on account of special aptitude; with reasonable reduction of the teaching schedules of all such counselors to allow for this special service.

This is an ambitious program, and it will take money: a small amount only for the cost of tests and scoring; a small amount also for extra clerical labor to maintain the cumulative records; but in large schools a substantial amount to provide the necessary reduction of teaching schedules for the counselors.

The point can hardly be overemphasized, however, that provision for adequate counseling—for *making use* of the test results and all the other material on the cumulative records *in individual guidance*—is the grand nub of the whole matter. Without effective provision for systematic counseling the rest of the program becomes largely abortive *as a guidance program*. The objective tests would still yield interesting results as to the success of teaching in the school, including the comparative efficiency of departments; and the cumulative records would doubtless be extremely valuable in special cases in which the principal or individual teachers come to "take an interest" in the old haphazard fashion. But the full fruition of a systematic guidance program that would select and develop the best potentialities of every student, for his own benefit and that of society, with a minimum of the present fumbling and waste, would be lost.

Obviously the proposed provision for counseling service involves provision for the instruction and training of counselors. This may be taken care of in some measure by self-training, through study of the literature; which should be supplemented by summer session work, and whenever possible by a year or more of resident graduate study under leave of absence. Universities and teachers colleges are rapidly instituting courses in personnel work and educational and vocational guidance which in time will solve this part of the problem.

Some answer to the frequent question as to the substantial utility of elaborate testing programs is contained, of course, in the preceding paragraphs. But that answer appears there only in general and abstract terms. Some concrete illustration may serve to clarify this point.

For example: a principal has in his high school a boy who is planning to prepare for the ministry or for teaching. The principal has doubts. The boy does not do well in his studies. He is probably docile and likable, but when it comes to book-learning he certainly seems to be "slow." But, without some evidence from objective tests, what can the principal do about it? Even if he ventures to express his doubts to the boy's mother, who dreams of seeing her son in the pulpit, will he get anywhere? He will not! But suppose the principal had some cumulative record of objective tests. Suppose that in a couple of psychological tests it appeared that the boy ranked in the lowest decile of bookish intelligence ("college aptitude")—not according to the principal's personal impressions, or in the opinion of local teachers, but on nation-wide or state-wide percentiles; and suppose that in several annual series of objective achievement tests his scores in such subjects as English, language, and history fell regularly in the lowest quintile—not in the grading of that high school, but on experimentally established norms. If those results were carefully and tactfully explained to the boy's father—perhaps to his mother, too—there would be some fair chance that that boy, on finishing the high school, would go to work in his father's store or enter the local business school to study bookkeeping, instead of seeking to go on to college and theological school or school of education. He would probably make an excellent clerk or bookkeeper, and six or ten years later there would be one less incompetent teacher to constitute a problem for his principal or superintendent or one less feeble minister to bring religion into disrepute in some community.

Again: the principal has another boy who is trying to prepare for a college of engineering. He is something of a mechanical genius. He can always repair the old family car and the radio no matter what has happened to them. And so his father sees him as a future consulting engineer, with $50,000 a year in retaining fees. But the boy finds mathematics a stumbling block. He has to repeat algebra and be tutored on the side in solid geometry. It is of little use, however, for the principal to cite these facts alone against a college course in engineering. Father will not listen: the high school mathematics teachers are no good, or they are "down" on his boy. But what if the principal had a record of achievement scores in algebra and geometry and physics and chemistry falling consistently in the lowest fifteen percentiles—not according to the local mathematics teachers, but in objective and standardized tests? That boy might then be allowed to take a job in a neighboring garage or in a radio supply store down town—which is probably just what the boy himself is eager to do,—and in due course he would probably have a good garage or radio business of his own. And there would be one less freshman to be brutally "flunked out" by M. I. T. or Cornell or Lehigh.

But on the other hand: the principal has a third boy who stands at the head of his class, whose intellectual curiosity and pleasure in learning and knack for coming out with ideas of his own make him a delight to his teachers. The principal thinks he ought to go to college, talks to him about college. But this boy's father doesn't think much of college, doesn't want to spend the money, and holds the opinion (not without some warrant) that high grades in the Blankville High School don't necessarily mean a whole lot. If, however, the principal's records include a series of annual psychological test scores which say that that boy ranks in the top one percent of human intelligence, so far as intelligence can be measured, and a series of annual achievement test scores which practically never dip below the top decile, he need only show those records to the boy's mother and tell her what they mean. That boy will go to college. Dad won't have a chance, and the money will be found in the family or in the town. And there is good reason to hope that a youngster whose superior abilities were on the way to be thwarted and wasted may turn out thirty years later to be a leader and creator in some valuable form of service to society.

In short, the good of a continuous program of testing, recording, and counseling is that it can make our educational and vocational guidance of individual boys and girls *systematic*, *assured* (in many cases, at least), and *convincing;* whereas without such basis it must remain haphazard, uncertain, and unconvincing, as it has been in the past.

It seems as if the time must come when due provision for such testing, recording, and counseling will be a regularly recognized item in every high school and college budget.

PRESENT STATE-WIDE PROGRAMS

Now for a brief and necessarily incomplete summary of what is actually being done to date in some of the states which have undertaken some measure of state-wide testing.

Minnesota

Minnesota is by way of being the pioneer in this procedure. Immediately following the War, Dean J. B. Johnston obtained, through Professor Yerkes, copies of the Army Alpha Test, and some testing within the University itself began at that time. About 1921 Professor D. G. Paterson instituted intelligence tests for the seniors in the Twin City high schools (Minneapolis and St. Paul), which led in 1927 to a state-wide program under the auspices of a Committee on Testing established by the Association of Minnesota Colleges. The tests used have varied through the years. In 1931 the Minnesota College Aptitude Test (480 vocabulary items) and the Iowa English Training Test (E T I, Form B) were given to substantially all the high school seniors of the state. For 1932 only the Minnesota test was given to all seniors, but the Iowa Mathematics Training Test was added for students planning to enter upon engineering or chemistry or other professional courses requiring the use of higher mathematics. The scoring and the entire central administration of the tests have been handled by the University of Minnesota Testing Bureau, the costs being pro-rated among the colleges of the state according to the numbers of high school seniors who enrolled in the several institutions.

Plans are now being developed for the extension of this program by instituting one or more preliminary tests in the tenth grade—precisely for the purpose of getting educational and vocational guidance under way at an earlier period and having it function continuously over an interval of at least two years, instead of being postponed till the last few months of the high school course, when it tends to center exclusively around the question of going to college and is already in many cases too late to yield its full benefits.

Of course the results of the senior tests, which are all that have been given thus far, have been reported to the participating high schools and to the cooperating colleges: the results for all seniors in a particular high school, in state-wide percentiles, to the principal of that school, with encouragement to use them in advisement; and a mimeographed list of all the students with their test ratings to each of the colleges. But the most interesting use of these results is that made in connection with admissions to the College of Science, Literature, and the Arts of the University of Minnesota. For this purpose the results of the tests have been figured into a "College Aptitude Rating", the composition of which Dean Johnston has described[6] as follows: "It is found in the case of each student by the combination in a simple arithmetic average of two factors. The first of these is the *rank* of the student in his high school class. All the high schools of the state cooperate with the college by calculating the average grades of all the students in the senior class and telling us the ranks of the individual students from the highest to the lowest. These ranks are converted into percentile ranks for convenience in comparing students coming from high schools differing in size. The second factor is the *college aptitude test*. This also is expressed as a percentile rank, and the two ranks are then averaged. From this results a simple figure which represents the position of the given individual among any random one hundred of those who may apply for admission as freshmen."

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[6] J. B. Johnston, "Who Should Go to College?", in *The Minnesota Alumni Weekly*, vol. 29, no. 19 (Feb. 15, 1930).

Elsewhere [7] Dean Johnston has reported that "the degree to which this rating differentiates entering freshmen is indicated thus: while satisfactory work [represented by a C average] is done by 96 to 100 per cent of those who stand in the highest five percentiles of the scale, not one student in five years of those who stood in the lowest fifteen percentiles has done satisfactory work. Up to the 30th percentile only 2.5 per cent have been satisfactory, and none of these has done better than C— work. Of all the satisfactory students 89 per cent are found above the middle of the scale and 11 per cent below the middle. In the five years from 1923 to 1927 just 99 per cent of the satisfactory students were found above the 30th percentile in this scale."

Quoting further from the first article cited: "What use is made of these ratings? As soon as the testing is completed the ratings of all students are reported to the authorities of their high schools, who make use of them in advising their pupils. As soon as students apply for admission to this college the C. A. R. [College Aptitude Rating] of each student is sent to him and his parents for their information. Other information furnished by the student in his admission blank together with the estimate of his principal or adviser enables the college to advise the student regarding his studies.

"The students whose ratings indicate practically no promise of success in college studies *are allowed to enter as non-candidates for a degree and are limited in their choice of studies* [italics mine]. They are not allowed to take foreign languages, laboratory sciences, or various technical courses. The studies which are open to them are such as should be of use to them in case they drop out of college after a short time: social studies, English, mathematics, and some vocational courses. Experience for two years has shown that a small number of these students do satisfactory work in these studies; whereas formerly none succeeded in the studies usually chosen. By withholding the more technical studies from these students we have protected a few of them from failure."

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[7] J. B. Johnston, "Advising College Students," in *The Journal of Higher Education*, vol. I, no. 6 (June, 1930).

The special program, described above, to which students with low ratings were assigned during the years 1928-29 to 1931-32, has now been made the basis of a definitely organized administrative unit called the Junior College which was opened in the fall of 1932. This new Junior College is attempting to provide a general cultural education specifically adapted to the needs and capacities of the low-rating group, with special emphasis on the development of social intelligence. Junior College students who show growth and promise may be transferred to the regular liberal arts college; on the other hand, students in the liberal arts college whose work is unsatisfactory may be transferred to the Junior College.[8]

Obviously this procedure represents both a notable development of educational guidance with respect to going to college and a skillfully diplomatic attack on the problem of selective admissions under the peculiar conditions of a state-supported institution.

Wisconsin

The University of Wisconsin instituted intelligence testing in its own Wisconsin High School as far back as 1920, and in the following year widened its program to include other selected high schools.[9] But the present state-wide program has derived from a resolution passed in the fall of 1928 by the Association of City Superintendents. Under this resolution there was established a committee which, in addition to studying admission blanks and cumulative records, set up a Cooperative Testing Program. Beginning in 1929 a single psychological or aptitude test has been given each year to practically all the high school seniors of the state (in 1929 the Ohio University Psychological Test, Forms 13 or 14; since then the American Council on Education College Aptitude Test). The scoring has been distributed among the cooperating colleges, while the Bureau of Guidance at the University has handled the checking and tabulating and acted as a general clearing house. The costs have been shared by both high schools and colleges; the high schools have paid for the test booklets, at 3½ cents apiece; while the labor costs for scoring, checking, and tabulating and other general expenses have, as in Minnesota, been pro-rated among the colleges on the basis of the number of Wisconsin high school graduates entering each college the following fall. The per-student cost to the colleges in 1932 was approximately 34 cents. Reports have been made as in Minnesota: the percentiles for the students of each high school to the principal of that school; and the entire list of students and percentiles to the cooperating colleges.

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[8] Other articles by Dean Johnston descriptive of this plan in its earlier stages have appeared in *School and Society* for January 16, 1926, *The Educational Record* for January, 1928, and *The Vocational Guidance Magazine* for October, 1928; see also the pamphlet entitled "Who Should Go to College?", published by the University of Minnesota Press, 1930. For an account of the latest development, see "The Junior College of the University of Minnesota," in *Provision for the Individual in College Education,* University of Chicago Press, 1932.

Undoubtedly considerable advisory use of these percentiles has been made in both high schools and colleges in Wisconsin. In particular the sponsoring committee has been interested in the large number of high-ranking seniors who had no thought of going to college anywhere. At the request of the committee President Glenn Frank wrote, in one year at least, to each senior who ranked in the top quartile and who had indicated no intention of entering college, explaining the predictive value of the test ("If a student who wrote a very good test also has a record of very good work done in high school, and if in addition he has a real desire to study, he will be practically certain to succeed in college work"), and urging consideration of the advisability of further education. "The results," Professors Henmon and Holt report, "were very gratifying. Different institutions reported that numbers of parents and their sons and daughters were encouraged to seek advice and admission to college as a result of this approach."

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[9] The factual material in this section has been drawn mainly from "A Report on the Administration of Scholastic Aptitude Tests to 34,000 High School Seniors in Wisconsin in 1929 and 1930," by V. A. C. Henmon and F. O. Holt, *Bulletin of the University of Wisconsin*, General Series, No. 1570 (June, 1931).

Of course it is recognized in Wisconsin, as in Minnesota, that for adequate educational guidance a single aptitude test given to high school seniors represents nothing more than a good beginning; and from a mimeographed report of the 1932 test and personal correspondence it appears that plans are under way for adding an aptitude test in the tenth grade and for the development also of a state-wide program of achievement tests.

Ohio

The Ohio testing program was instituted in 1929 under the auspices of the Ohio College Association. Since that time the Ohio State University Intelligence Tests (Forms 15-17) have been given annually to more than 90 per cent of the high school seniors of the state; and in 1932 Ohio took a long step forward by making the test available to high school *sophomores;* it was taken in that year by 21,181 sophomores in addition to approximately 28,500 seniors. The scoring has been done and all the general administration handled at the Ohio State University under the direction of Professor Herbert A. Toops and with the cooperation of Professor Harold A. Edgerton. The results of the senior tests have been used by the cooperating colleges in connection with admissions and by the State Department of Education in fulfillment of the requirements for admission to teacher training. But the outstanding features of the Ohio program are:

1. The fullness of the reports made to the high schools, which have contained careful interpretations of the test results and numerous specific suggestions for their actual use in counseling and guidance, with accompanying discussions of the predictive value of high school and elementary school records, age, sex, health, and personality factors, study programs,

extra-curricular activities, occupational choices, financial handicaps, and the like.[10] These discussions are extremely specific and are based directly on the literature and carefully documented. Obviously these reports have opened wide doors, for principals and teacher advisers throughout the state of Ohio, to an unusually thorough acquaintance with existing knowledge and current practice in this field; presumably they have resulted in helpful guidance already rendered to hundreds if not thousands of individual students.

2. The intensive use of test results in research projects. In June, 1930, a committee of the Ohio College Association "devoted two full days to the review of a list of research projects which the Chairman [Professor Toops] and Committee had formulated. This conference resulted in Bulletin 61, 'Two Hundred Proposed Research Problems for a Five-Year Research Program into the College Entrance Program.' "[11] A form letter addressed under date of August 10, 1932 to research bureaus of education throughout the United States lists ninety-one bulletins available at that time, covering many different phases of the testing and guidance problem.

Of course the Ohio testing program has suffered, like those of Minnesota and Wisconsin, from being limited thus far to intelligence testing only. This fact is fully recognized by the Committee and its Chairman. Professor Toops in an address delivered at Oberlin College in 1931 advocated a "more ideal program," which should include the annual use throughout the high school years of both intelligence and achievement tests. Doubtless, therefore, the present program will be extended as rapidly as may be feasible.

Iowa

The Iowa program is by far the most extensive which has been developed thus far in any state, reaching every pupil in all the high school years throughout most of the high schools of Iowa; and it differs from the programs previously described in that it uses achievement tests rather than psychological or aptitude tests, the latter type of test not being included in the official Iowa program.

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[10] Compare *A Suggested Program of Pre-College Guidance for High Schools* (prepared largely by Professor Herbert A. Toops), Ohio State University Press, 1929; also *Ohio High School Bulletin No. 4* (mimeographed), by Herbert A. Toops and Harold A. Edgerton, March 30, 1931.

[11] *Ohio College Association Bulletin No. 70* (mimeographed), *1930*.

This program has been incorporated in and powerfully motivated through the "Iowa Academic Contest," which has been sponsored annually for four years past by the College of Education and the Extension Division of the State University of Iowa, under the directorship of Dr. E. F. Lindquist. This contest "involves the administration of a battery of objective achievement tests in from three to four hundred high schools. These tests are given on the same day, under carefully standardized and uniform conditions, to every pupil enrolled in each of the subjects tested."[12] Fourteen of the more fundamental academic subjects in grades nine to twelve are included, and a sixty minute test is given in each. The subjects are: "English Correctness," English literature, American literature, first-year Latin, second-year Latin, world history, American history, American government, economics, algebra, plane geometry, general science, biology, and physics. "A single composite measure of general school achievement is determined for each school. The schools are classified in four enrollment groups": A, enrollment above 400; B, 126-400 inclusive; C, 66-125 inclusive; D, 65 and below. "Each school is then given a ranking, on the basis of its composite (every-pupil) measure, both with reference to the total group of participating schools and also with reference to the schools in its own enrollment classification. . . . The highest scoring pupils in each subject are selected from the schools in each of the four enrollment classifications in each of nine geographic districts of the state. For these superior pupils, numbering over a thousand, a State Scholarship Contest is later held at the State University, at which the best scholars in each subject are determined on the basis of a more intensive testing program. To these winning scholars appropriate medals and trophies are awarded."

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[12] This and following quotations from "The Iowa Academic Contest," by E. F. Lindquist, *Bulletin of the State University of Iowa*, New Series, No. 667 December 23, 1932.

It appears that the central purpose in Iowa has been the improvement of high school instruction by utilizing the competitive impulse which has proved so effective in athletics and other extra-curricular activities; carefully insuring, however, that the competitors shall include *every pupil* in every school. In the bulletin already cited this purpose is discussed as follows:

> "Teachers and pupils have evinced an intense interest in the showing made on the contest examinations. The better pupils, through the State Scholarship Contest, are given a real incentive to make the most of their abilities, while the average and below average pupils recognize that they are equally responsible for the showing of their school in the every-pupil comparisons. The best teachers welcome the opportunity to have the success of their efforts measured; they are pleased to know that competency and efficiency will be definitely recognized. The result in many schools has been a complete change in general morale and attitude towards work on the part of both the faculty and the student body.
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> "The most significant of the purposes of the project is that of accelerating improvement in the content and methods of high school instruction. A wide gap has always existed between accepted theory and practice in high school teaching. Research centers, institutions of higher education, committees of authorities in the various fields of subject matter, as well as other specially constituted bodies and agencies, have long been active in the preparation of curriculum materials, in experimentation for the improvement of instructional methods, and in making the results of their efforts available to the schools in printed form. The majority of the high schools, however, have been slow to accept these recommendations or suggestions and to incorporate them in their practices. The carefully prepared research reports and curriculum materials, if they have reached the teachers at all, in many cases have only gathered dust on neglected bookshelves. What is needed is an immediate and concrete incentive—a challenge appealing to more human motives—to make use of these materials for the improvement of teaching. The competitive features of the Iowa Academic Contest provide this incentive. School administrators have recognized the possibilities of the project in this respect and have utilized this incentive with their teachers and school boards to bring about much more quickly than would otherwise have been possible needed improvements in the content and methods of instruction."

Dr. Lindquist explicitly disclaims any intention to "dictate" or "standardize" either content or methods. The goal is improvement in the results of teaching, irrespective of what is taught or by what procedures. Accordingly, the Iowa Achievement Tests, used in the Contest, are revised annually to take account of changes in curriculum and teaching techniques. In particular, the tests "are constructed with a conscious and deliberate purpose to *defeat* rote learning" and "mechanical drill procedures" resulting chiefly in "a mass of more or less meaningless verbalizations." The questions used regularly demand, not mere facts—names, dates, definitions, formulae, laws—but the interpretation of facts by the recognition of relationships, sequences, causes, results, implications, contradictions, and the like. This aspect of the tests is strongly emphasized in the valuable series of Subject Matter Circulars which are prepared annually and distributed to the schools participating in the Contest.

While educational guidance has thus far been subordinated in Iowa to this effort at immediate improvement of instruction through the incentive of competition, the tremendous possibilities of the situation for guidance purposes have not, of course, been overlooked. "Since the inception of our program," writes Dr. Lindquist (in a personal letter), "we have had in mind the eventual use of our tests as a principal source of data for cumulative records for individual high school pupils." It is obvious that, with achievement test results already available for every student in all fundamental subjects throughout the four-year course, there is needed only the addition of one or more aptitude tests and the development of cumulative records and counseling to establish the most complete state-wide system of educational guidance to be found anywhere in the nation.

Other States

Limitations of space forbid more than passing mention of a few of the other state-wide testing programs already under way or proposed for the immediate future.

In Colorado, where President George W. Frasier of the

State Teachers College has been active in the testing movement, the American Council on Education College Aptitude Tests were given in the fall of 1931 and again in 1932 to high school seniors, under the joint auspices of the Colorado-Wyoming Association of Registrars (representing the colleges) and the Colorado organization of high school principals and superintendents. The scoring and computations were taken care of by the Personnel Department of the Colorado State Teachers College under the direction of Dr. J. D. Heilman. Reports were made, of course, to the cooperating colleges and high schools, and a letter similar to that sent out by President Frank in Wisconsin was mailed to high-ranking seniors. The Colorado State Teachers College has advised applicants ranking below the tenth percentile against entering that institution. Plans for the future include the extension of the program, when financially possible, to include personality trait tests and achievement tests covering the whole range of high school subjects.

The Alabama program "originated with the Principals' Association of the state. They were eager to find some way by which superior pupils might be discovered and brought to the attention the colleges."[18] In 1931 and 1932 Forms C and D respectively of the Otis Self-Administering Test were used. So far all expenses have been borne by the high schools. The names of 1950 students, out of 5500, who scored 43 or better were listed in ten groups according to rank, and these lists were sent to the colleges. Precise information as to what use the colleges made of the lists is not yet available, but the colleges have "urged that the tests be continued."

Mention should be made, finally, of a testing program in North Carolina conducted by the Examinations Committee of the North Carolina College with the cooperation of the Division of Research of the University of North Carolina; of a program, including both a psychological test and achievement tests in English and mathematics, which is to be proposed to the high schools of Kentucky for the spring of 1933 by a committee of the Kentucky College Association; and of an ambitious program in the State of Washington, to be carried out under the auspices of the state superintendent's office with tests constructed annually to cover the material of grades three to twelve as prescribed in the state courses of study, which has been held up on account of financial difficulties.

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[18] Quotations and data from personal letters from Dr. W. L. Spencer, Director of Secondary Education, Alabama Department of Education.

It is clear that a very substantial beginning has been made in the use of educational tests and the development of educational and vocational guidance. Definite and valuable guidance, based on psychological tests alone, or psychological tests plus high school performance, is under way in Minnesota and Ohio. Encouragement in the direction of higher education is given to high ranking students (in psychological tests) in Wisconsin, Colorado, and Alabama. Iowa is exploring extensively the possibilities of achievement tests in the improvement of instruction, and half a dozen other states are getting programs under way.

Of course we have as yet no state-wide program that is even fairly complete—that will check against the more or less "ideal" program outlined earlier in this article, utilizing *all* the new instrumentalities now available: psychological tests, achievement tests, cumulative records, and systematic counseling. But no such full consummation could possibly be hoped for at this writing. If one takes into account the extreme youth of the whole testing movement, the vast amount of educating of college officers, high school officers, state officers, and the public that must be carried through, the difficulties of setting up state-wide organizations representing many none-too-harmonious groups, and the necessity of finding funds, the progress made to date is somewhat astonishing.

Moreover, in every state whose operations are described above there is—as noted in each case—definite recognition of the limitations of the current set-up, and in every case plans are either actually under way or under consideration for extending the scope of the present program.

It may be noted, also, that while we have as yet no state-wide program which is as inclusive as could be desired, there are individual schools and school systems which are already supporting substantially complete testing and guidance systems. Among individual schools could be cited several of those holding membership in the Educational Records Bureau, which is performing a notable service in developing the use of tests, cumulative records, and wise educational guidance among its two hundred odd member schools. Among school systems may be mentioned that of Providence, Rhode Island, which now has something like a complete program installed in its elementary schools and junior high schools and expects to extend that program during the present year to include the senior high schools.

Passing mention may be made, finally, of a development which is really intriguing: the North Central Association of Colleges and Secondary Schools, in its study of new types of standards, is exploring the possibilities of objective tests in connection with the accrediting of colleges. To this end it has made arrangements to give during the current year a college sophomore test in sixty institutions which are cooperating in this study.

In short it appears: (1) that educational guidance is now possible; (2) that in individual schools and systems it is an accomplished fact; and (3) that it is certainly on its way into all the nation's schools, state by state, and proceeding with remarkable rapidity—quite as rapidly, in fact, as is probably desirable or safe.

MAX MCCONN,
Lehigh University.

The Improvement of College Teaching

THE primary function of colleges—whether independent or within universities—is to teach. The question as to whether they are performing that function well is therefore a matter of primary concern. The general answer is that they do not really know whether they are teaching well or not.

Criticism of the colleges on the ground of poor teaching is rife, both without and within academic circles. Nevertheless, college faculties in general believe that college teaching on the whole is rather good, though by no means completely good, and that its level is steadily rising. But college teachers admit, as indeed they must, that there exists no satisfactory measure of the quality of college teaching.

In recent years the problem of the improvement of college teaching has received attention from various administrative and educational organizations, notably from the Association of American Colleges. But the problem is essentially one for college teachers themselves rather than for anyone else. It is, therefore, very appropriate and very promising that the problem should have been studied carefully during the last two years by the American Association of University Professors, through a special committee on College and University Teaching. The committee received a generous subvention from the Carnegie Foundation for the Advancement of Teaching and the Carnegie Corporation of New York. The report of this committee, now published by the Association, constitutes far and away the most important and potentially influential document in this field.

The committee consisted of Professor W. B. Munro as Chairman, Professor F. K. Richtmyer as Vice-Chairman, Professor Fernandus Payne as Secretary, and Professors George Boas, A. L. Bondurant, Alzada Comstock, Hardin Craig, and C. H. Judd. This personnel provided adequate representation for different regional and different departmental viewpoints.

Five college or university presidents, together with Secretary Tyler of the American Association of University Professors, and Miss McHale of the American Association of University Women, served as advisory members of the committee. Professor Homer L. Dodge of the University of Oklahoma was engaged as Field Director to spend a year visiting colleges and universities, gathering data and opinions. The choice of the method of personal visitation rather than the questionnaire method proved to be in every way a happy one. Meanwhile Professor Payne undertook a survey of the printed materials bearing on the problem. The material prepared by Professors Dodge and Payne was reviewed carefully by the entire committee, and the resulting Report is truly a committee product.

The Report—aside from introductory and supplementary material—consists of two main parts: first, the Committee's Findings, which cover about twenty printed pages; and second, a General Discussion of the Committee's Findings, which covers about seventy printed pages.

For the Findings themselves, which were adopted verbatim by specific votes, the entire committee is responsible. The General Discussion—notably well written—is the work of the Chairman of the Committee, with the assistance of the Field Director and the Secretary. This Discussion was also reviewed by the entire committee, and in point of fact may fairly be regarded as expressing the views of the committee, although it did not seem wise or necessary to seek verbatim approval for this extensive material.

Each of the two parts—the Findings and the General Discussion—is divided into twenty sections, with the following headings:

1. The Purpose of Teaching
2. The Quality of College Teaching Today
3. The Attraction of Superior Personnel to the Profession
4. Present Facilities for the Selection of College Teachers
5. The Relation of Teaching to Research
6. Are Criteria of Good Teaching Practicable?

7. The Rating of Teachers by Students and Alumni
8. Teacher Training for College Teachers
9. The Teacher's Responsibility for Educational Policy
10. Assisting the Teacher in Service
11. Special Recognition of Good Teaching
12. The Teacher's Security of Tenure
13. Non-Teaching Activities in Their Effect upon Teaching
14. The Proper Determination of the Teaching-Load
15. Dividing Large Classes into Small Sections
16. Sectioning on the Basis of Ability or Achievement
17. Comprehensive Examinations and External Examiners as Aids to Good Teaching
18. New Type Tests as a Means of Improving College Teaching
19. Administrative Machinery for the Improvement of Teaching
20. Experiments with New Methods of Instruction

A student of the Report after—or even before—reading it as a whole, will do well to read immediately after a given section of the Findings the corresponding section of the General Discussion.

The vexed question of the possibility of really measuring the quality of college teaching, discussed under headings 6 and 7, is not solved. The general situation is well indicated in the Findings:

> Nearly every college professor believes himself to be a good teacher, in fact a particularly good one. There is no way of convincing him to the contrary; at any rate the colleges have as yet devised none that he is ready to accept as conclusive. Both good and poor teaching are for the most part left to make themselves known through campus gossip and other such casual channels. What is needed, therefore, is the setting up of some systematic plan whereby the quality of teaching can be determined in a more dependable way.

The main position taken by the committee in this connection—the same position is taken in other connections—is that the problem should be attacked from the point of view of a given department or group of departments rather than from the point of view of the college as a whole, in view of the fact that aims, purposes and methods of instruction vary so much in different departments or groups of departments.

Three specific suggestions are made: that a study of examinations as set and of the work done by students in examinations should yield information as to the quality of the teaching; that college administrators might well provide departments from time to time with a reasonable appropriation to facilitate a self-study of their own work; and that student or alumni ratings may be helpful if obtained not for administrative purposes but for the information of the instructor and in accordance with a procedure which he approves. Negatively, the idea that good teaching may be located by observing the trends in the registration of good students is shown to be untenable; and the administrative use of student and alumni ratings is severely criticized.

My own single but extensive experience in securing ratings from recent alumni has convinced me on the one hand that such ratings, if properly devised, have a very high degree of reliability; and on the other hand that, despite their value, they cannot, without disaster to morale, be sought so frequently or so regularly as to create in the student body expectation that they, the students, are sooner or later to rate their teachers, and in the faculty the knowledge that they, the faculty, are sooner or later to be rated by their students. Once in a long time, and under special circumstances, carefully devised alumni ratings might well be used—provided (and the proviso is important) that the plan be cleared in detail with the faculty or with responsible representatives of the faculty before it is put into operation.

The suggestions as to evaluation of teaching by study of examinations and by departmental self-surveys, while they are well worth following up, have obviously more value in the case of the larger institutions than in the case of the smaller colleges, where so many departments are one- or two-man departments, and the great majority of the teachers are above the rank of instructor.

The ability to measure the quality of teaching would be of value for two quite different purposes: for administrative determination of merit with reference to reappointment or advance in salary or rank, and for the convincing of the teacher concerned that his work could and should be improved in certain respects. The suggestions of the committee hold more promise, on the whole, with reference to the latter purpose than to the former—though many a teacher confronted with documentary evidence of his ill success would be likely to question the evidence rather than the excellence of his own work. The Report really gives little or no help to the administrative officer concerned with basing appointment actions on satisfactory rather than unsatisfactory evidence as to teaching ability.

Yet it must be recognized that attainment of excellence is after all more important than the determination, or even than the just rewarding, of excellence. "The real question," as is said in the General Discussion (p. 39), "is not whether college teaching is good or poor, but how much better it can be made in view of the difficulties which it frequently encounters" —and, I would add, in view of the fact that so many teachers are far from ready to realize that their own teaching is inherently open to substantial improvement.

The Report, in most of its sections, does in fact make many suggestions which are certain to bear fruit if they fall upon willing ground. I do not see how any individual teacher can read the Report carefully and conscientiously without finding much that he can utilize to the advantage of his own work; and I think that the treatment of methods and devices which call for administrative or for faculty group action is equally rich in practical proposals.

The discussion, in the sections numbered 8, of the preparation of college teachers, is a notable instance of the endeavor to find a reasonable mean between strongly conflicting opinions. Its range is much broader than the heading, "Teacher Training of College Teachers," would indicate. The development of a breach between departments of education and all other college departments is one of the saddest and most unnecessary developments in recent educational history. Extremists on both sides have been much to blame. Thought and writing such as are found in these sections of the Report should help greatly in the bridging and the filling of the breach.

The problem of assisting the teacher in service, dealt with in the sections numbered 10, is of central importance. The tradition is against such assistance:

> College teachers are for the most part a law unto themselves. They have less supervision than is given to men in almost any other profession. Hardly anywhere else are men employed to do what they please in any way they please. (Pp. 67-68.)

In the case of the young instructor, at least, there is every reason for the abandonment of the tradition in favor of a plan of guidance comparable to that given to a young doctor in his interneship—a plan devised not as an inquisition but completely as a means of helpfulness. How much better college teaching would be, how many impeding mannerisms and thwarting habits would have been avoided, how many "better ways" revealed and followed, if most of us had received such guidance at the beginning of our careers from elders concerned both for the excellence of the teaching done in their departments and for the welfare of each new instructor!

The remarks of the Report in this regard, both in the Findings and in the Discussion, are plentiful and practical. The old question of visitation is well handled—though I think that, assuming visitation to be departmental and to be motivated by the desire to be helpful, its regularity is more important than its informality.

Reference, not unfavorable, is made to the recommendation of the Commission of the Association of American Colleges on Enlistment and Training of College Teachers that the process of advising new instructors should be centered mainly on the making and reviewing of periodic reports by the young teachers; but the fear is expressed that the making and scrutinizing of regular reports would tend to formalize the whole procedure unduly. It is indeed of the essence of the plan that such reports should be informal rather than formal—not responses to questions on a printed form, but observations and queries, brief or lengthy, worked out by the instructor in his own way. Such reports may deal either with general problems of the classroom or with the cases of particular students. The making of such reports tends to give to the young instructor a scientific attitude toward his own work as teacher, and thus directly to strengthen his resolution to teach well and his understanding of the processes involved.

The committee has done its work excellently: it is much to be hoped that the publication of the Report will be followed by its careful consideration by individuals and by groups within the membership of the Association, and by any others who have the opportunity of affecting, in any substantial way, the general conditions under which college teaching is done.

Ideal teaching results only if the teacher himself, first of all, wills effectively to become the best teacher, in every respect, that it is possible for him to be; and if, unto the effective willing, there is added the reenforcement of a thoroughly responsive educational environment.

ERNEST H. WILKINS,
Oberlin College.

Twelfth Annual Conference of International Student Service

INTERNATIONAL Student Service, which held its Tenth Annual Conference at Mount Holyoke College, South Hadley, Massachusetts, in 1931, and its Eleventh Conference at Brünn, Czechoslovakia, in 1932, divided its Conference this year into two parts, a four-day session at Kloster Ettal, Bavaria, followed by a four-day session at Fortress Luziensteig, near Ragatz, across the border in Switzerland.

The political changes which had taken place in Germany this spring, the stress laid by the National Socialists on nationalism, their critical attitude toward all things international, and their harsh treatment of the Jews raised the question in the minds of some friends of the movement as to whether it was a propitious time for an international group to meet in Germany; whether freedom of speech would be possible; and whether a world organization committed to ideals of human brotherhood could, without sacrifice of principle, place itself under obligation to German hosts who represented in some measure the Nazi party. Other friends of the movement were impressed by the fact that it was a critical time in the determination of Germany's world relations, and that to rebuff the hospitable German invitation would be to intensify Germany's tendency toward withdrawal from cooperation in world affairs. They felt that the ideals of the organization demanded at least an effort to know at first hand and to understand the forces at work in Germany, before passing any final judgment.

As a compromise between these conflicting views, it was finally decided to hold the first part of the Conference as originally planned at Ettal, then to adjourn to Switzerland so that those who might not be welcome in Germany or who had conscientious scruples against fraternizing with the representatives of a revolutionary movement involving injustice and violence, might have an opportunity to share in the deliberations, and so that, in case the Government of Germany should find it expedient to restrict freedom of discussion, there might still be opportunity for dealing freely with such delicate questions as the relief of Jewish students compelled by the new conditions to discontinue their studies in Germany.

The decision was a happy solution in a time of uncertainty of a difficult problem, although as it turned out the proportion of delegates who did not feel free to go to Germany but were willing to attend the session in Switzerland proved much smaller than had been expected, and the atmosphere at Ettal proved freer of restraint and more conducive to frank and friendly interchange of opinion than had been feared. The Conference will go down in history as unique because it not only sought to look at its problems from both sides of the questions but also looked at the questions from the opposite sides of an international boundary.

Ettal, selected by Emperor Ludwig the Bavarian some six hundred years ago as a good place for a monastery because of its retired seclusion among the mountains, its pure air, good water and sunshine, had every qualification of a good meeting place. Twenty-eight hundred feet above sea level, halfway between Oberammergau and its railroad station Oberau, only two hours by motor over a good road from Munich, Ettal has lost its remoteness of recent years and a constant procession of motor cars rolls through the village. The monastery is not only a monastery, a church, a farm, and a factory for liqueurs, but it has expanded its teaching function and become internationally known as a secondary school for boys. A large modern school building, the grateful gift of a twentieth-century convert to Catholicism, furnished commodious and comfortable rooms both for the general sessions and for group and committee meetings, while the extensive refectory planned for the school boys made it easy in vacation time to provide meals for the one hundred and fifty visitors. Across the road from the convent an excellent modern hotel reinforced the hospitable facilities of Ettal Kloster. Add to these surroundings the delightful weather which the last week of July gave to southern Germany, and the stage was well set for a successful conference.

There were nearly two hundred delegates from twenty-five countries. America had twenty-eight, Canada eight, England twenty-four, France fifteen, Germany twenty-nine, Holland nine, India twenty-three. The great majority were students, graduate and undergraduate, but there were at least a dozen professors and an equal number of officials of various educational organizations. The Vice Chairmen were Gareth Maufe, of Cambridge and London, England, Jean Thomas, of the Ecole Normale Supérieure, Paris, France, Adolph Morsbach, of the Deutsche Akademische Austauschdienst, Berlin, Germany. Professor Edward Bullough of Cambridge, Rennie Smith of the English Labor Party and until the last election a Member of Parliament, Fraulein Lieselotte Traun-Strecker of Berlin, M. Poberezski of Geneva, were some of those who served so acceptably as interpreters. Some of the German students, such as Kurt Ellersieck of Dresden, were men who had risen quite in the American democratic fashion from humble beginnings to high office in the Studentenschaft, the organization which has been playing so dominant a rôle in German university affairs, making and unmaking professors, adding to and subtracting from the schedules of university lectures, usurping the functions of the one-time State Ministers of Education.

Dr. Walter H. Kotschnig, General Secretary of International Student Service, born in Austria, residing in Geneva, married to an English wife, with his children in a French speaking school, himself speaking and thinking equally well in French, German, and English, a sincere and scholarly student of universities and university life, editor of that excellent book "The University in a Changing World," showed himself once more under difficult circumstances unusually well qualified to conduct a conference so diverse in its origins. How many international problems would be solved if everyone in authority were equally at home in three languages! How many university problems would be avoided if all professors could be scholarly and yet retain a lively human interest in the individual student! How much more rapidly all educational conferences and committees would move if more men could like Kotschnig express their ideas with equal clearness and facility in oral and written word.

No pains were spared by the Brothers at the convent to see that the needs of the Conference were anticipated or promptly met. Herr Dr. Friedrich Beck, the indefatigable presiding genius of the Studentenhaus in Munich, who had borne the chief responsibility for the preliminary conference arrangements, had also provided a curtain-raiser the night before in Munich and had gathered in a large number of the delegates to meet Munich students, to hear some good speeches, to dance and to sample Munich beer. If there was any ice, it had been broken before the four or five auto busses rolled into Ettal with one hundred and fifty delegates and a ton of suitcases. Nazi uniforms were much in evidence that first day. Herr Cultusminister Schemm of Bavaria, Chief of Staff of the Nazi forces, Herr Ernest Roehm, his Adjutant, Herr Meier from Berlin, all in their uniforms, came whirling up in a glittering official car, and were greeted on the steps of the monastery by the wise and gracious old Abbot, seventy-seven years of age, who in his opening address set things in proper perspective by reminding us of the armies that had tramped that way in the days of Rome, of the political and social changes which the old monastery had witnessed through six hundred years. It was an important day for Ettal—the Concordat had been signed the day before; said to be the first time an agreement had ever been signed between the Vatican and the general German Government—the new State had found room in Germany as Mussolini had found it in Italy for State and Church to go on, at least a while longer, in mutual forbearance and respect. By chance an educational conference had brought leaders of the government into the precincts of the monastery, so the Church played host to the State as well as to education and youth, and some of us were invited by the Abbot to join that evening in toasting the Concordat in good Rhenish wine.

The National Socialists are men of action. They lost no time in setting before the representatives who had gathered from twenty-five nations the ideals and philosophy behind the National Socialist Movement. The Chief of Staff, fourteen times wounded in the World War, imprisoned with Hitler in 1923, who has since the conference marched at the head of the hundred thousand Nazi troopers in Nuremberg, assured the students that so far as the men who fought in the World War were concerned, they had no desire for another war. The Cultusminister told how National Socialism rated men above property, character above learning, how they planned to reshape social institutions, including universities, with a more sympathetic understanding of the needs and desires of the ordinary man; how they planned to exalt the sturdy old German ideals of friendly community life and to make room for kindliness with less of greed and fevered haste.

The Minister had spoken the previous day at Bayreuth and had been impressed by the fact that people of so many nations had come to that city because Germany had something truly German to give them in music. He stressed the fact that a real "symphony of nations" could only develop when each nation had something worthwhile of its own to contribute. The last lurking apprehension in the minds of the Conference disappeared with that remark. If a Nazi official dared breathe the possibility of a "Chor der Voelker," then evidently it was no more dangerous to talk of international questions in Germany than it is to mention the League of Nations on Capitol Hill in Washington. With an American chairman, an Austrian secretary, an Englishman, a Frenchman and a German as Vice-chairmen, with English, French and German as the official languages of the Conference, with a group of twenty native students from India in the center of the hall and more than a score of nations represented, the international character of the Conference was sufficiently manifest. To see the native Indians listen to the dogmas regarding the State so confidently enunciated by the Nazis, to see them obviously reflecting, "is this generalization true also for India," gave the American, who in these days is perhaps as conscious of the Orient and its problems as of the Occident, much food for thought.

With true German thoroughness a Professor from Berlin was on hand to lay a philosophic basis for National Socialism. He insisted that German civilization was not something brought to the German tribes from Rome. German culture was no fringe on the garment of Latin culture. The way of the Germanic tribes was in itself a culture, and fighting was itself an essential element thereof. This was the most disquieting note of the eight days. Following this line the speaker created a concept divorced from reality as we Americans conceive reality, but capable of exerting great influence and working great damage to Germany as did the concepts the professors spun before the World War. One could see even in an hour's lecture that a web was being spun and a theory laid down which would render inapplicable to Germany the moral judgments common to the rest of mankind. But, if such webs must be spun, better that it should be done in the open light of international conference and in the presence of other German professors of quite different type.

It was a hard working conference. Morning, afternoon and evening, the delegates attended the long sessions with great fidelity. The necessity of having all the speeches rendered in three languages was made less tiresome by the charm and skill of the interpreters. Provision was made in the afternoons for national group sessions, where discussions could be more informal and conducted only in one language, so that progress could be more rapid.

At the first session, when the floor was thrown open to general discussion with the request that volunteer speakers first send up their names on slips of paper with the assurance that speakers would be called in the order in which their names were received, there was a pause. Apparently of the hundred and fifty not more than one or two wanted to speak. It looked for a few moments as if the Conference had failed of one of its main purposes. But after the first speech or two the names began to come in, and from that time on until the end of the Conference there was no lack of speakers. It was only a question of how many could be crowded in before each mealtime came. They were good speeches, too. There was little repetition, little thrashing of old straw, little that was irrelevant. If the observant listener marked the greater literary finish of the French speeches, he was impressed also by the oratorical vigor of the Germans. As Hollander, Italian, Englishman, Canadian, Indian, American, followed each other in rapid succession, one was impressed more by the community of thought than by the divergence of expression. Perhaps it was because the general theme was political, "The Relation of the Student to Political Questions," that even the Americans did not seem to have come from a different world isolated from the problems common to other men. All seemed to find the problems the same, however different the solutions suggested. Most of the nations were represented by women as well as by men, and, once the discussion was well under way, the women made their own contribution to the interchange of opinion. At Ettal the addresses, both formal and informal, were concerned largely with the plans and the purposes, the hopes and ideals of the new order in Germany. Formal subjects set down in the program included also "The Attitude of the Younger Generation to International Questions," "The Obligations of Universities to the Social Order," "The Fundamental Ideas of International Student Service."

At Luziensteig the main subjects were the practical work of the various committees and commissions of the organization. At Ettal no votes were taken, no resolutions passed. At Luziensteig formal reports were drawn up, resolutions were formulated, and expressions of opinion definitely recorded. The Report of Commission I dealt with the work of the Department of University Research and its publications, research being concerned with the problem of overcrowding of universities and with other current educational problems in various lands.

The Report of Commission II dealt with cultural cooperation and international studies. It outlined plans for a series of regional conferences concerned with specific problems, as for example, a Franco-Anglo-German conference on economic problems; a Dutch-Swiss-German-French conference on fundamental legal concepts and legal instruction; a Franco-Spanish conference on political questions; a Balkan conference on university problems peculiar to that region; a Franco-Italian conference on Fascism; a conference for white and negro students in South Africa; an American economic conference. The Commission also approved a project of inquiring into university attitudes toward moral disarmament and into the problem of instruction in international civics.

Commission III concerned itself with the work of the department for student self-help, particularly the report on student homes and student clubs in various countries, and lent its support to a project for a conference on student house problems in 1934. Loan funds, scholarships and vocational guidance all came in for their share of consideration.

Commission IV dealt with social service work and work service, including work camps, settlement work, adult education and student help to foreigners. The German delegation offered to hold in Germany an international conference on work service, and the Commission endorsed heartily the proposal. The new German regulation requiring of all prospective university students in Germany a year in a work camp is being watched by the rest of the world with interest.

Commission V was charged with the field of relief activities and special projects. This included the work in India, the work in China, and the port service for foreign students. The problem of aiding Jewish students unable to continue their studies in Germany came in for a large share of the time and attention of the Commission.

There was general recognition of the need of such aid and it was felt to fall within the province of I. S. S. to undertake the work. The question which aroused discussion was how funds could be raised and relief administered without placing the I. S. S. organization in the position of taking sides in the German political controversy and making it appear that I. S. S. was rallying all other countries to the aid of a defeated minority. How to extend aid to the needy without appearing to pass judgment on the moral quality of a political policy which rendered them needy, was not an easy question to solve.

After hours of discussion a compromise was finally reached which all felt they could accept, although it was far from satisfactory to some. The representatives of Jewish student organizations and the English wanted more definite condemnation of German policy. The French wanted at any cost logical consistency. The Germans wanted it recognized that, in an international organization where all were equal, internal German policies should be judged by Germans, and that, while the demands of common humanity for common human needs should be met wherever found, no one particular group should be singled out for attention above all others. The Americans mediated between the English and French on the one side and the Germans on the other to help clear away misunderstandings and to save the organization from a split which at one time seemed imminent. Through all the discussion tempers were well kept and the debate left no scars.

The day required for the transfer from Ettal to Luziensteig included a memorable ride by motorbus through a scenic strip of Austria over the Arlberg Pass and across the little principality of Lichtenstein. As the Germans could not pass through Austria, they started an hour or two earlier and took another route.

In addition to this all-day picnic there was a special performance at Oberammergau one evening by some of the players who participate in the Passion Play of a morality play showing how the Passion Play came to be established; there was a reception by the Burgomaster of Ettal with speeches and song; and finally a farewell party with singing and dancing tendered by the German delegation to their guests.

That the Conference advanced the cause of international understanding, that it contributed to the liberal education of its participants, that everybody had a good time in spite of the war clouds hovering near and the tension in the political atmosphere, all who were privileged to participate, agree.

JOHN H. MACCRACKEN,
Washington, D. C.

Student Loan Fund Survey

THE American Alumni Council authorized a survey to be made last March to ascertain the facts regarding the loan fund situation among our colleges and universities, and to present these facts to the Reconstruction Finance Corporation in the hope that federal aid might be made available for student loan funds. A committee was appointed to conduct this survey, with Edward H. Stromberg of Northwestern University as chairman.

The committee prepared a questionnaire which was sent out on March 6 to some 700 American colleges and universities. This questionnaire was designed to secure information, not only on the need for loan funds, but on the general status of our institutions of higher learning, including the situation as to student enrollment. To these questionnaires, a total of 181 institutions responded by March 20, which was the deadline set for their return. In view of the fact that no follow-up letter was used, and that only two weeks were permitted for the return of the questionnaires, it is believed that the response was very good.

Practically every type of school—state, municipal, endowed, denominational, etc.—was represented in the returns, and as a result a very fair cross section of the colleges and universities of the country was secured.

The information on all the questionnaires was carefully tabulated, and here are some of the significant facts which were revealed:

1. Ninty-five per cent of the institutions stated that no further retrenchment could be made without seriously impairing the effectiveness of their educational programs.
2. Of those schools answering the question, 95 out of 161, or 59 per cent of the total, operated at a deficit in 1932-33. Eighty-nine schools operated at a deficit of $2,412,802. On the assumption that these schools represented a fair cross section of all the schools, it was found that our colleges and universities incurred operating deficits of approximately $11,200,000 during 1932-33.

3. One hundred and fifty-three schools reported a total reduction in faculty between the years 1930-31 and 1932-33 of 942 members. Assuming that these 152 schools represented a fair cross section of American colleges and universities, it was determined that 4,239 faculty members were released during the period.

4. One hundred and thirteen schools reported a release of administrative, maintenance and other workers during the years 1930-31 and 1932-33 of 743 people; an extension of this ratio for the 700 schools showed a total reduction for this type of worker of 4,532.

5. Including faculty, administrative and other workers, the total number of workers released from colleges and universities between the years 1930-31 and 1932-33 was 8,771, or an average of 4,385 for each of the two years.

6. Ninety schools out of 130 reporting, or 69 per cent, stated they would release workers this fall in all departments; this same proportion for the 700 schools would give a figure of 6,170 college and university workers to be released. In other words, the number of released workers this fall will be 40 per cent greater than the average for the previous two years.

7. One hundred and thirty-six out of 700 schools reported a reduction in faculty salary of $4,673,785 between 1930-31 and 1932-33; an extension of this ratio to all schools would show a total reduction in faculty salary for the period of $23,836,303.

8. One hundred and eight out of 700 schools reported a reduction in salary of administrative and other workers of $2,876,513 during the years 1930-31 and 1932-33; on a pro-rata basis, the total reduction in salary to administrative and other workers would be $18,697,334 for the period.

9. Including faculty, administrative and other workers, the total salary reduction made in the 700 colleges and universities during 1930-31 and 1932-33 would be $42,533,637.

10. One hundred and forty-eight schools out of 167 replying to the question, or a total of 88 per cent, stated they would reduce their budgets for the year 1933-34; these reductions will range from 5 per cent to an extreme of 50 per cent; 79 schools will reduce their budgets in 1933-34 by a total of $5,176,235; an extension of this ratio to 88 per cent of the colleges and universities gives an approximate budget reduction this fall of $40,374,633. In other words the amount of

the budget reduction this fall will be practically twice as large as for the average of the pervious two years.

11. One hundred and seventy-eight schools out of 700 reported a drop in full-time student enrollment of 36,460 between the years 1931-32 and 1932-33; an extension of this ratio for the 700 colleges and universities would indicate a drop in student enrollment for the period of 142,194.

12. One hundred and thirty-nine schools answering the question estimated a drop in student enrollment this fall of 11,500; assuming that these 139 schools represent a cross section of the country, we would have an estimated reduction in student enrollment for this fall of 57,500.

13. One hundred and forty-seven schools reported that $2,910,150 in additional loan funds would be needed for the year 1933-34 to be given to students of capacity and with an adequate conception of their obligation to repay; an extension of this figure for 700 schools would indicate a need for all colleges and universities of loan funds totaling approximately $14,000,000.

14. One hundred and forty-six schools reported that 9,912 worthy students could be kept in school in 1933-34 on loans of $100 each, 9,913 students on loans of $200 each, and 6,891 students on loans of $300 each. An extension of these figures for the 700 schools would indicate the following numbers: 47,577 students on $100 loans; 47,582 on $200 loans; 33,076 students on $300 loans.

15. To keep all these worthy students in school would require loan funds as follows:

47,577 students on $100 loans	$ 4,757,700
47,582 students on $200 loans	$ 9,516,400
33,076 students on $300 loans	$ 9,922,800
Total loan funds	$24,196,900

16. To keep 100,000 of these students in school would require loan funds as follows:

47,577 students on $100 loans	$ 4,757,700
47,582 students on $200 loans	9,516,400
4,841 students on $300 loans	1,452,300
100,000 students with loans of	$15,726,400

This survey indicated, therefore, that over 6,100 college professors and other workers would lose their jobs this year, that over $40,000,000 would be lopped from educational budgets, and that some 60,000 to 100,000 students would be financially unable to return to school in the fall.

To present these facts to the Reconstruction Finance Corporation, a committee consisting of Frank Hadlock,[1] Thomas Gonser,[2] Edward Stromberg and Felix Grisette[3] went to Washington on June 20th. Conferences were held with Mr. Jesse Jones, chairman of the Reconstruction Finance Corporation, and with Stanley Read, general counsel of the R. F. C., relative to what might be done in making funds available for student loan purposes.

Out of these conferences it was learned that the R. F. C. is empowered to make loans only for specific purposes and to certain specified types of financial institutions, such as banks, insurance companies, railroads, etc. It was finally determined that the only possibility of a loan might come through a credit union, which is one type of institution to which the R. F. C. may make loans. This financial vehicle was then investigated in the hope that it might serve as the means whereby student loan funds might be supplied to educational institutions through R. F. C. aid.

A credit union is a cooperative association organized within a defined homogeneous group, in accordance with state laws, and under the supervision of some state department. It is managed by a board of directors and committees, chosen by and from the membership. Its purpose is to supply the members with a simple, convenient system for saving money and making it possible for them, with their own savings and under their own management, to take care of their credit problems at reasonable rates of interest. The interest paid by members on loans reverts to the members as dividends on their savings and as surplus.

The committee then approached the Credit Union National Extension Bureau at Boston, of which Edward Filene is president, relative to what might be done in organizing a credit union on a national basis through which the R. F. C. might make loans to students.

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[1] Univ. of So. Calif.

[2] Northwestern Univ.

[3] Univ. of No. Carolina.

It was the opinion of Mr. Roy Bergengren, Executive Secretary of the Extension Bureau, that a credit union on a national basis to cover all colleges and universities could not be organized, since only thirty-eight states and the District of Columbia have favorable credit union laws. However, intra-state or individual school credit unions can be organized which might be of considerable value in developing loan funds for the use of needy students.

Concerning this, Mr. Bergengren writes:

> "A credit union could be organized to serve the faculty, students and former students of a particular college. Such a credit union could make loans to students in the college, and the students could retain their membership in the credit union after graduation, as they would still be within the original scope of the charter of the credit union. This credit union would get its funds from its members, and presumably those funds would result in such a case from the share subscriptions primarily by faculty members and well-to-do alumni who would be sympathetic with the purpose of the credit union, and would therefore be glad to invest in it. Assume that such a credit union, operating under an average credit union law, had resources of $50,000. It would then be permitted by law to borrow from any source $25,000, or 50 per cent of its resources. Such a credit union could borrow that amount from the Reconstruction Finance Corporation and use it for these loans."

It is probable that the credit union may be of considerable future value in building up loan funds in some of our colleges and universities, especially in those which have not established among their alumni the principle of annual giving through the alumni fund. Its value to institutions now maintaining alumni funds is, however, less obvious. Educational institutions that desire to investigate further the possibilities of the credit union can secure full information from the Credit Union National Extension Bureau of Boston.

The final conclusions of the committee are that, except through the credit union, no loan fund aid can be expected from the R. F. C. unless its loaning powers are liberalized by congressional action. Perhaps this might be accomplished after

Congress reconvenes, but it would require the full support of all our educational institutions, which is hardly likely to be forthcoming.

The committee deeply regrets that it is unable to make a more favorable report on how the present need for additional student loan funds can be met. Despite a failure to produce results, a good deal of publicity has been secured through the loan fund survey, and this has been of considerable value.

In conclusion, the committee desires to thank all those whose cooperation and encouragement have made it possible for this survey to be undertaken.

EDWARD H. STROMBERG,
Northwestern University. *Chairman.*

Since the interview with officials of the Reconstruction Finance Corporation, representatives of the American Alumni Council have made an investigation of the machinery of and State laws applying to, credit unions. This investigation convinces us that the procedure is too complicated for the colleges and universities to adopt, and that a national credit union is not feasible. It appears that the only hope for securing loan fund aid for students lies in Congressional action to expand the field of the R. F. C.

The Board of Directors of the Council, at their last meeting reaffirmed their desire to assist college students to continue their education, and directed me to establish contacts with the officers of various college and university associations for the purpose of offering to cooperate in any plans that may be undertaken for this purpose.

HERBERT F. TAYLOR,
President, The American Alumni Council,
Worcester Polytechnic Institute.

The 1933 College Sophomore Testing Program

I. INTRODUCTION

THE Committee on Educational Testing herewith presents its report on the testing program for the 1932-33 period. This committee is a sub-committee of the Central Committee on Personnel of the American Council on Education. The committee works in cooperation with such other agencies of the Council as the Cooperative Test Service, with the Educational Records Bureau, and with several state and institutional testing organizations. When this committee was first appointed in 1931 it was expected that it would operate in the college field, and it was given the name of Advisory Committee on College Testing. After one year of experience it became evident that the committee should extend its services to the secondary field and the relations between secondary school and college; hence the name was changed to the Committee on Educational Testing.

The function of the committee is to encourage the use of standardized tests in high schools and colleges and to lend its aid, whenever possible, to make the results of tests available for individual guidance. To this end the committee has conducted the examination for sophomores in 1932 and 1933, has introduced the new series of Cooperative Achievement Tests for use in secondary schools and as placement tests at entrance to college, and has offered its services in connection with the organization of testing programs by state associations of colleges and schools.

Very significant developments have taken place in the field of state-wide testing programs,[1] and plans are taking form in other states. Since the Cooperative Tests were offered in August, 1932, more than two hundred thousand of them have been used in secondary schools and colleges. Cooperative testing programs under the auspices of associations of colleges and schools, aimed at better adaptation of educational opportunities to the interests and needs of the individual, are now prominent features of the educational organizations in Pennsylvania, North Carolina, Ohio, Kentucky, Alabama, Mississippi, Wisconsin, Minnesota, Iowa, and Colorado, while similar plans are developing in Georgia, Texas, Missouri, and Washington. It is the desire of the Committee on Educational Testing to be helpful, wherever possible, through cooperation with local agencies in the development of such plans. The committee is strongly convinced of the importance of using tests which are comparable from year to year and which are widely used so that the individuals in any institution or class may be able to compare themselves with other individuals who have had similar opportunities.

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[1] McConn, Max, *Educational Guidance is Now Possible,* EDUCATIONAL RECORD, Oct., 1933.

It must be clearly realized that it is in no sense the purpose of this committee to institute comparisons between schools, to rate institutions as good or better, or to encourage a spirit of contest among schools or colleges. The only emulation that we would encourage is in giving better opportunities to individuals that they may be better trained to serve their society. The committee in its reports and correspondence has discouraged institutional comparisons for this reason and has avoided making known the identity of participating institutions. In the present report there is not even given a list of colleges showing their relative ratings. The justification for this is abundantly evident in the interpretation of test results given below. These results are commended to the attention of the faculties of the few colleges which have declined to take part in these tests for the reason that colleges which they regard as their equals are not represented in numbers among the participants. The central fact of significance in the test results reported below is that the student body of every college presents similar great ranges of ability and the consequent poor adjustment of educational opportunities to the capacities of the individuals for social service. In other words, every college, whether its scores are comparable with those of other institutions or not, will find ample reasons for the use of such tests because they reveal so clearly the ranges of achievement, the differences of ability and the varied direction of interests among their own students alone. The purpose of the committee in promoting testing programs is to put into the hands of college faculties information which will assist them in making their curriculum, their methods of teaching, and the conditions of student life in their institutions most useful and helpful to each of the many different individuals in their student bodies.

Report of Test Uses, 1932.—That the work of the committee does contribute to these ends is evident from the response given by the colleges and the use of test results made by them. Of the colleges participating in the sophomore program last year, 97 have reported to the committee some of the uses which were made of these results. In general the reports give striking evidence that the colleges have gained valuable information of a survey nature and that they are aware of the need for individual guidance.

Several colleges have begun the use of cumulative record cards on which are kept the high school percentile rank, scores on placement tests, aptitude tests, and the sophomore examinations along with college grades and various ratings of subjective and objective nature; the cards will serve not only for educational guidance but are to be used in helping to place the student after he has graduated. In one of these schools a rather low but positive relation between amount of formal course work and performance on the sophomore tests has led to giving credit for independent study after satisfactory performance on comprehensive examinations. Still another college has made similar provisions for promising students as a consequence of a study designed to reveal whether regularity of class attendance was significantly related to scores on the tests.

Most commonly the test results have been accepted as one of the criteria for advising students in regard to a major sequence and the election of special courses; or again they have been used in recommending students for scholarships and for honors. In the main, more individual attention has been paid to students who ranked in the top third than to those in the lowest third, although a few colleges report that test scores along with other evidence have been used for recommending that especially low-ranking students discontinue college work in favor of work more suited to their capacities and needs.

Especially enlightening are the investigations of transfer students. Some of the larger colleges have required the sophomore tests of such students and have found large and significant differences between test scores even when transfer records were fairly uniform. In some instances differences between the local group and the transfer students as a whole were equally striking. One student was described as having failed a key course in mathematics; he returned the following semester with transfer credit for the work and was allowed to continue until he failed in more advanced courses. Other cases illustrate the reverse side of the coin. An applicant for admission to a senior college was found to have inadequate credits, but after he had identified himself with the top one per cent on the sophomore tests his application was accepted.

This brief sketch of the uses to which test results have been put is in part an answer to the charge that colleges are not interested in individual guidance. In 1932 the colleges undertook for the first time a national survey involving tests of achievement in college work. The fact that 70 per cent of the participating schools have reported uses of the results in the interest of individual students argues strongly for a genuine interest in individual educational guidance.

II. THE 1933 COLLEGE TESTING PROGRAM

For the technical analysis and discussion of results the committee is indebted to Dr. Ben D. Wood, Director of the Cooperative Test Service.

Participating Colleges.—Contrary to all expectations, and in spite of the increased financial stringency, more colleges participated in the 1933 than in the 1932 program. In 1932, 140 colleges participated; in 1933, a total of 158 colleges in 40 states ordered tests. Of these 11 withdrew, for various reasons, one because the decision was made before the scoring was completed to close its door for the ensuing year. In addition to the 11 that definitely withdrew, 10 institutions were unable to send in final reports in time for inclusion in this report. Of the remaining 137 colleges, three did not give any tests to sophomores. One tested only the senior class. Thus the maximum number of colleges represented in the sophomore tables and charts reported below is 134.

While the number of colleges participating in 1933 is slightly greater than in 1932, the number of pupils tested is smaller—something over 10,000 in 1933 as against over 15,000 in 1932.

As noted above, the participating colleges are scattered in 40 states. Minnesota, represented by 15 colleges, has the largest number of any state. Pennsylvania is represented by 12; Illinois and Iowa by 8 each; New York, California, Missouri, Kentucky, and Georgia by 7 each; Ohio by 6; and New Jersey, Tennessee, and the District of Columbia by 5 colleges each. The full list of colleges by states follows:

ALABAMA
- *A. and M. Institute
- †Birmingham-Southern College
- Selma University

ARIZONA
- †Arizona State Teachers College
- *University of Arizona

ARKANSAS
- State A. and M. College

CALIFORNIA
- *Immaculate Heart College
- La Verne College
- †Mills College
- Riverside Junior College
- San Benito County Junior College
- *San Bernardino Valley Union Junior College
- Santa Rosa Junior College

COLORADO
- †Colorado State Teachers College
- †Colorado Agricultural College

CONNECTICUT
- †Bridgeport Normal School
- †Connecticut College
- †New Britain State Normal School

DISTRICT OF COLUMBIA
- Gallaudet College
- Immaculata Seminary
- †Mount Vernon Seminary
- †Trinity College
- *Wilson Teachers College

FLORIDA
- *Bethune-Cookman College

GEORGIA
- †Emory University
- Georgia N. and A. College
- *Georgia State Womans College
- Mercer University
- Oxford Junior College
- †Shorter
- Valdosta Junior College

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*Colleges which are not included in the national sophomore distributions.

†Colleges which gave the tests in both 1932 and 1933.

- ILLINOIS
  - Aurora College
  - Eureka College
  - †Lake Forest College
  - LaSalle-Peru Junior College
  - Monmouth College
  - Rosary College
  - †St. Xavier College
  - †Wheaton College
- INDIANA
  - †St. Mary-of-the-Woods College
- IOWA
  - †Centerville Junior College
  - Columbia College
  - †Graceland College
  - Independence Junior College
  - Lenox Junior College
  - Penn College
  - Trinity College
  - †Wartburg College
- KANSAS
  - †St. John's College
- KENTUCKY
  - †Berea College
  - †Caney Junior College
  - †Centre College
  - *Eastern Kentucky State Teachers College
  - Louisville Municipal College for Negroes
  - Mount St. Joseph Junior College
  - †University of Louisville
- LOUISIANA
  - Dodd College for Girls
- MAINE
  - Westbrook Seminary and Junior College
- MARYLAND
  - Blue Ridge College
  - †St. Mary's Female Seminary
  - †Western Maryland College
- MICHIGAN
  - Adrian College
  - *Olivet College
  - Port Huron Junior College
  - Spring Arbor Junior College
- MINNESOTA
  - †Augsburg College
  - †Bethany Lutheran College
  - †Carleton College
  - College of St. Benedict
  - †College of St. Catherine
  - †College of St. Scholastica
  - †Concordia College
  - Eveleth Junior College
  - †Itasca Junior College
  - †St. John's University
  - †St. Olaf College
  - †St. Paul-Luther College
  - †St. Thomas College
  - †University of Minnesota
  - Virginia Junior College
- MISSISSIPPI
  - †Millsaps College
- MISSOURI
  - †Cottey Junior College for Women
  - †Kansas City Teachers College
  - †Kemper Military School
  - *Missouri Valley College
  - †Northeast High School Experiment
  - †Park College
  - *Rockhurst College
  - †Stephens College
  - †*Wentworth Military Academy
- MONTANA
  - Carroll College
- NEBRASKA
  - †Dana College
  - †Hebron College
  - Peru State Teachers College
  - Scottsbluff Junior College
- NEW JERSEY
  - †Brothers College of Drew University
  - †College of St. Elizabeth
  - Georgian Court College
  - *Seton Hall College
  - †State Teachers College, Trenton
- NEW MEXICO
  - New Mexico Normal University
  - New Mexico State Teachers College

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*Colleges which are not included in the national sophomore distributions.

†Colleges which gave the tests in both 1932 and 1933.

- NEW YORK
  - College of Mount St. Vincent
  - †*College of New Rochelle
  - Columbia College
  - *Experiential Groups
  - Keuka College
  - Skidmore College
  - †University of Buffalo
  - University of Rochester
- NORTH CAROLINA
  - *Brick Junior College
  - †*Johnson C. Smith University
  - St. Augustine's College
- OHIO
  - †Antioch College
  - Hiram College
  - Marietta College
  - Muskingum College
  - *St. John's College
  - †Wittenberg College
- OKLAHOMA
  - †Muskogee Junior College
  - Northwestern State Teachers College
  - *Oklahoma College for Women
- OREGON
  - Linfield College
  - Oregon Normal School
  - †Pacific University
  - †Willamette University
- PENNSYLVANIA
  - Allegheny College
  - College Misericordia
  - *La Salle College
  - Marywood College
  - Penn Hall Junior College
  - Rosemont College
  - *St. Joseph's College
  - †St. Thomas College
  - Seton Hill College
  - State Teachers College, California
  - Thiel College
  - Villanova College
- RHODE ISLAND
  - Rhode Island College of Education
- SOUTH CAROLINA
  - Allen University
  - *College of Charleston
  - Limestone College
  - Presbyterian College
- TENNESSEE
  - Knoxville College
  - †Southwestern University
  - Tennessee Wesleyan College
  - †Tusculum College
  - †Ward-Belmont School
- TEXAS
  - Paris Junior College
  - †Texas Christian University
- UTAH
  - Snow College
- VIRGINIA
  - †Sweet Briar College
  - Virginia Intermont College
- WASHINGTON
  - *College of Washington
  - †*Washington State Normal School
- WEST VIRGINIA
  - †Bethany College
  - †Salem College
- WISCONSIN
  - The Stout Institute

The Tests Used.—The tests used in the 1933 college sophomore testing program included the following:

1. Cooperative English Test, Series 1, Form 1933. A comprehensive English examination prepared by S. A. Leonard, V. A. C. Henmon, M. H. Willing, W. W. Cook, D. G. Paterson, and F. S. Beers, including sections on English usage (100 items, 65 minutes), spelling (55 items, 10 minutes),

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*Colleges which are not included in the national sophomore distributions.
†Colleges which gave the tests in both 1932 and 1933.

vocabulary (100 items, 20 minutes). Total, 255 items, 95 minutes.

2. Cooperative Literary Acquaintance Test, Form 1933. A literary acquaintance and literary information test prepared by F. S. Beers and D. G. Paterson (200 items, 45 minutes).

3. Cooperative General Culture Test, Form 1933. A cultural test, largely informational in character, prepared by E. F. Lindquist, H. R. Anderson, S. Timberg, J. Storck and others, including three sections: history and social studies, 268 items, 80 minutes; foreign literature, 295 items, 55 minutes; fine arts, 240 items, 45 minutes. Total, 803 items, 180 minutes.

4. Cooperative General Science Test for College Classes, Form 1933. A brief general science test prepared by R. W. Tyler, H. W. Farwell, G. M. Kay, W. J. Eckert, S. R. Powers, F. L. Fitzpatrick, O. E. Underhill, V. H. Noll, and A. W. Schindler; 270 items, 60 minutes.

5. Cooperative General Mathematics Test for College Classes, Form 1933. A comprehensive test of high school mathematics, with brief sections on college algebra, analytics, and calculus; prepared by H. T. Lundholm, and L. P. Siceloff; 166 items, 120 minutes.

6. A Foreign Language Test: French, German, or Spanish (reading 80 items, vocabulary 100 items, grammar 100 items) or Latin (vocabulary 100 items, grammar 100 items, reading 137 items); total time for each language test, 90 minutes.

All of these tests were constructed by the Cooperative Test Service and its collaborators. The General Culture, General Science, and General Mathematics tests were constructed specially for this program. The English and foreign language tests used in this program are the 1933 Forms of the Cooperative English test, Series 1, and of the Cooperative French, German, Spanish, and Latin tests. Reliability coefficients and correlations of these tests with college and school grades are given later (page 46).

Combinations of Tests Used.—Not all of the tests listed above were given in all participating colleges. While most of the colleges gave the General Culture, English, and Literary Acquaintance tests, and a majority the General Science test, the combinations of tests used in many colleges varied markedly. One institution gave only the Literary Acquaintance test; some gave only the English; some only the General Culture; while, at the ideal extreme, a few colleges gave all or nearly all the tests to all students in all classes.

Classes Tested.—Nearly all the participating colleges gave one or more of the tests listed to the sophomore class; five colleges gave most of the tests to all students in all four college classes. A few colleges gave tests to a scattering of students in all four classes. Two or three colleges tested apparently all students in three classes. Twenty-eight colleges gave one or more tests to students in at least two classes. One college tested only the senior class.

While institutional comparisons are not an important concern of the committee, all colleges were asked to indicate what portion of each class was tested. Only 16 of the colleges have reported definitely that their classes were not completely tested. Some of them restricted the tests to students in the second semester of each class, and two or three made the tests optional with the students. Only 45 colleges definitely reported that all members of each class tested took the tests, but there is a presumption that most of the non-reporting colleges tested the entire class or classes in which tests were given at all.

These uncertainties regarding the class and institutional representativeness of the groups tested and the various combinations of tests used in each institution should be kept in mind in interpreting the data presented below.

Accuracy of Scoring.—In the 1932 program the scoring of all tests was centralized and was done by trained and supervised clerks who had had long experience in the difficult task of accurate scoring and computational work. In the 1933 program, most of the scoring was done at the participating colleges, usually under the supervision of officers who had considerable experience in testing work. The scoring of a few colleges has been checked, and many small and a few large errors have been discovered. The errors were for the most part concentrated in the returns from colleges in which the scoring was done under pressure of time, and in which circumstances apparently did not permit careful checking. The returns from most of the colleges bore internal evidence of careful and repeated checking, and it is gratifying to report that the returns from these colleges were practically flawless.

The record of the checking of the additions of part-scores on the report sheets of about one hundred thirty colleges aggregating ten thousand students shows a total of 788 errors in something less than 30,000 opportunities for errors of addition. Of these 788 errors, 315 were errors of 1 to 4 points, and 57 of 5 to 9 points. In view of the spread of the scores, these errors are not notably alarming; but errors of 10 or greater are disquieting, to say the least; and those 50 or above not only destroy the value of the test but may lead to positive injustice. The record shows 416 errors greater than 9, 208 greater than 19, 120 greater than 39, 83 greater than 59, 64 greater than 99, 4 greater than 149, and 1 error of 300 points.

While most of these errors were corrected by the colleges themselves after sending in the report sheets but before making use of the test results, the possible injustice to the students whose scores were in error by 40 or more point gives concrete emphasis to the need for faithful and meticulous checking and rechecking of test results. Such errors not only may lead to injustice to individuals here and there, but may tend to discredit tests as a source of valuable supplementary guidance information.

The figures reported above should not be interpreted as a reflection on the participating colleges. The time allowance for scoring the tests and reporting the results was too short. Many colleges called attention to this fact. Moreover, the possible injustice to a few individuals must not be exaggerated. In using test results it is a basic rule to check all indications that are in conflict with other evidence, and it is hardly conceivable that any actual use would have been made of the significantly erroneous scores reported above before the errors had been discovered and corrected.

III. SOPHOMORE TEST RESULTS

In this report, the results of the few simple tabulations that have been made will be presented very briefly, with a minimum of interpretation and comment. For the sake of brevity, the tabulations are presented and discussed without reservations regarding the validity of the tests, but the reader should remember throughout that the committee is conscious of the limitations of the tests used.

As already indicated on preceding pages, the detailed analysis of the results of the tests for each college was left to those most conversant with the local situation and those who are, therefore, most able to make useful analyses—the officers in each college. The results of the tests will be valuable to the extent that they are analyzed in the light of local conditions, and to the extent that such analyses are brought to bear upon the fundamental problem of giving to each individual student a more effective type of educational guidance. From this viewpoint, the most important part of this section of the report will be Table 1 (page 14), since this table will enable each institution to interpret the score of each student on each part of each test in terms of national percentiles. From the viewpoint of the committee, such study of individual students is vastly more important for education than the comparisons of institutions, types of institutions, professional goal groups, and classes, made below. The committee hopes that the large amount of space necessarily taken by even a brief presentation of such comparative data will not raise them in the eyes of any reader from the subordinate position which they occupy in the committee's whole program.

National Sophomore Percentile Scales.—In consonance with this view, national percentile scales are presented in Table 1. This table will enable each college to determine the national standing of each student who took one or more of the tests. In view of the large differences among colleges, it may be more convenient for purposes of local analysis for each college to construct similar scales based entirely on local returns. This suggestion is made particularly to those colleges whose averages are far from the national average, since colleges at or

TABLE 1.—National percentile scales for the tests given in April and May, 1933, to college sophomores. The scales are based upon returns from all sophomores tested, regardless of curricular division or type of institution, for whom reports were received up to June 10, 1933. These tables show true percentiles, calculated from the distributions of scores. They are thus different from the percentiles in the 1932 report, which were derived from the standard deviation.

Each score in each column shows the upper score limit of the percentile indicated at the extreme left and right of the line. For example, the bottom entry in the History and Social Studies column shows that all scores of 14 or below have a percentile of 1; all scores from 15 to 20, inclusive, have a percentile value of 2; and all scores above 177 have a percentile value of 100. Scores of 82 to 86 have percentile values of 51 to 55, and scores from 77 to 81 have percentile values from 46 to 50. Many colleges used variant combinations of tests, hence the numbers of cases and of colleges vary from column to column. The mean and sigma of the scores and the number of colleges involved in each column are shown at the top of each column.

	Hist. & S. S.	For. Lit.	Fine Arts	Total Gen. Cult.	English Usage	Spell.	Vocab.	Total English	
No. of Colleges	124	124	124	124	132	132	132	132	
No. of Cases	8,996	8,996	8,996	8,996	10,161	10,161	10,161	10,161	
Mean	84	45	34	163	63	32	50	145	
Sigma	36.2	27.8	24.4	77.7	17.7	13.4	18.2	42.8	
Percentiles									%iles
100	220	215	210	610	115	56	95	250	100
99	177	133	111	386	96	54	87	228	99
98	164	119	99	355	94	53	84	221	98
97	157	111	91	336	92	53	82	217	97
96	153	104	85	320	90	52	81	214	96
95	148	99	80	308	89	51	79	211	95
94	145	95	77	299	88	51	78	208	94
93	142	91	74	289	87	50	77	206	93
92	139	88	71	282	87	50	76	204	92
91	136	85	68	274	86	50	75	202	91
90	134	82	66	267	85	49	74	200	90
88	129	78	63	256	84	48	73	197	88
86	125	74	59	246	82	48	72	193	86
84	121	71	57	238	81	47	70	190	84
82	118	68	54	230	80	46	69	187	82
80	115	65	52	223	79	45	68	184	80
75	108	59	47	208	76	44	64	178	75
70	102	54	42	195	73	42	61	171	70
65	96	50	39	183	71	40	58	165	65
60	91	46	35	172	69	38	56	159	60
55	86	43	32	161	66	36	53	153	55
50	81	40	29	151	64	34	50	147	50
45	76	37	26	142	62	31	48	141	45
40	72	34	24	133	59	29	45	135	40
35	67	31	21	124	56	27	42	129	35
30	62	28	18	115	54	24	39	122	30
25	57	25	16	105	51	22	36	115	25
20	52	22	13	96	47	19	33	107	20
18	50	21	12	92	46	18	32	104	18
16	47	19	11	88	44	17	31	100	16
14	45	18	10	83	42	16	29	96	14
12	42	16	9	78	40	15	28	92	12
10	39	15	7	73	38	13	26	87	10
9	37	14	7	71	37	12	25	83	9
8	35	13	6	68	36	12	24	80	8
7	33	12	5	64	34	11	23	77	7
6	32	11	4	61	33	10	21	74	6
5	30	10	4	57	31	9	20	71	5
4	27	9	3	53	29	8	19	67	4
3	24	7	2	48	26	6	17	62	3
2	20	5	1	42	23	5	15	55	2
1	14	3	0	32	19	2	11	44	1

TABLE 1.—*Continued*

	Lit. Acq.	Gen. Cult. + English + Lit. Acq.	Gen. Sci.	Gen. Math.	College Grade	Age	
No. of Colleges	129	120	101	66	118	131	
No. of Cases	9,433	8,537	7,269	2,842	9,042	10,283	
Mean	69	379	44	41	5.4	19.7	
Sigma	31.6	140.9	24.4	23.8	1.7	2.0	
Percentiles							%iles
100	190	1000	195	145	9.9	52.0	100
99	147	743	119	112	9.7	27.4	99
98	140	698	105	103	9.4	25.3	98
97	134	669	98	98	9.1	24.4	97
96	130	647	93	93	8.9	23.7	96
95	126	629	89	90	8.7	23.3	95
94	123	615	86	86	8.6	22.9	94
93	119	603	84	83	8.5	22.7	93
92	117	591	81	80	8.3	22.4	92
91	115	580	79	77	8.2	22.2	91
90	113	569	77	75	8.1	21.9	90
88	109	551	74	71	7.9	21.7	88
86	105	534	70	68	7.8	21.5	86
84	102	519	68	65	7.6	21.3	84
82	99	506	65	62	7.5	21.1	82
80	96	494	63	59	7.4	20.9	80
75	90	469	58	54	7.1	20.7	75
70	85	447	54	49	6.8	20.5	70
65	80	425	50	45	6.6	20.3	65
60	75	405	47	42	6.3	20.1	60
55	71	385	44	38	6.0	19.9	55
50	66	368	41	36	5.8	19.8	50
45	62	349	38	33	5.6	19.6	45
40	58	330	35	30	5.4	19.5	40
35	54	312	32	28	5.2	19.3	35
30	49	294	30	25	5.1	19.2	30
25	45	275	27	23	4.8	19.1	25
20	41	256	24	21	4.4	18.9	20
18	39	246	22	20	4.3	18.8	18
16	36	236	21	19	4.1	18.7	16
14	34	227	19	18	4.0	18.6	14
12	32	217	18	17	3.8	18.5	12
10	30	206	16	16	3.6	18.3	10
9	28	200	16	15	3.5	18.3	9
8	27	193	15	15	3.4	18.2	8
7	25	186	14	14	3.3	18.2	7
6	24	179	12	13	3.2	18.1	6
5	22	169	11	12	3.1	18.1	5
4	20	159	10	11	3.0	18.0	4
3	18	145	9	10	2.7	17.9	3
2	16	129	7	9	2.3	17.6	2
1	12	107	5	6	1.9	17.2	1

near the national average may use the national scales without serious distortion of individual records. This table shows national percentile scores for each test and for one combination of tests of the college sophomore examination given in April and May, 1933.

The data on college grades and chronological age were obtained from the participating colleges in accordance with the following directions:

"It is requested that age at last birthday and average college grade be indicated for each student who takes one or more of the tests. In reporting the average grade the code given below should be used. This code is necessary because different institutions use different symbols for grades, some using letter grade, A-B-C-D-F or E-G-F-P, etc., and some using percentages. In order to maintain comparability as far as possible between the grades for different institutions it is requested that you transmute whatever system of grades you use into marks of Excellent, Good, Fair, Poor, and Probation. In some institutions only students who receive 95 or above may be considered excellent. In other institutions a student receiving an average of 85 may be considered excellent. The intermediate points in the code, namely, 2, 4, 6, and 8, are provided in order to permit adjustments in cases in which there is some doubt regarding the group in which the student's average places him.

9	Excellent
8	
7	Good
6	
5	Fair
4	
3	Poor
2	
1	Probational or Failing"

Percentile Scales of Foreign Language Tests.—Table 2 shows abbreviated percentile scales for indicated credit groups for each of the four foreign language tests based upon all returns available at the time of writing this report. The numbers of cases are small, and the scales should therefore be used cautiously. It is the hope of the committee that much larger numbers of the foreign language tests will be used in the 1934 program.

The results of these tests given in May, 1934, will be particularly valuable if the 1933 foreign language tests are given in September, 1933, as placement tests. Since the 1933 and 1934 tests are comparable, their use in September, 1933, and in May, 1934, will make possible the study of growth in foreign language achievement of individual students and classes.

The comparisons of colleges made on the basis of the sopho-

TABLE 2.—Foreign language test percentiles for indicated credit groups. This table s to be read in the same way as Table 1. In view of the small numbers of cases, the percentiles are here given in abbreviated form.

Language	French			German			Spanish			Latin			
No. of Colleges..	55	66	39	47	50	19	32	32	19	22	27	26	19
No. of Cases....	706	1,136	744	346	468	105	369	269	64	156	130	212	117
Mean..........	77	124	166	65	98	176	69	112	138	49	107	142	140
Sigma..........	49.5	52.4	53.7	50.8	57.9	59.2	48.7	51.7	52.1	40.0	46.4	46.3	54.2
Years of College Credit........	1	2	3	1	2	3	1	2	3	1	2	3	4
Percentiles													
100	250	270	280	270	280	280	270	270	270	210	260	280	280
98	203	231	253	232	236	259	216	245	238	168	212	239	237
93	157	207	238	153	197	248	150	191	216	120	172	216	219
90	146	197	232	134	178	243	140	179	211	108	166	206	209
84	130	181	222	111	160	235	108	170	196	85	157	187	199
80	120	172	216	96	147	230	101	157	192	74	150	181	193
75	108	162	209	85	136	224	90	145	176	64	144	173	181
70	99	153	202	77	124	219	81	136	169	57	137	166	174
60	82	136	187	64	106	205	69	121	153	48	123	153	160
50	69	122	173	53	88	188	57	106	134	39	103	143	139
40	58	107	158	42	74	170	48	92	123	30	87	133	125
30	45	92	139	33	61	145	39	77	108	24	77	117	108
25	39	84	130	29	53	131	35	72	100	21	72	108	98
20	31	76	121	25	45	120	30	65	92	18	66	100	93
16	26	70	110	21	38	109	26	58	84	16	60	93	86
10	19	58	91	16	27	91	20	49	71	12	51	79	68
7	14	49	77	13	21	73	17	42	57	10	44	73	56
3	6	32	56	7	14	51	12	32	46	5	29	60	35
1	2	15	31	2	10	30	7	24	42	1	21	47	23

more tests of 1932 and 1933 are very interesting from many points of view; but comparisons based on *growth*, rather than upon status at the end of a given year, would be both more interesting and far more significant. A college that on the present tests stands very high might appear relatively low on a growth basis; i.e., its students may be very high at entrance, and need not advance much in order to secure a high standing on the tests as given this year. On the other hand, a college that appears relatively low in the present comparative tables might stand very high when judged on the basis of the amount of growth enjoyed by its students during the interval between taking the placement tests at entrance (or transfer) to college, and taking the achievement tests one or more years later. The sequential nature of foreign language study makes a growth study in this field very attractive, and the committee strongly urges the colleges to consider carefully this opportunity for a new type of educational research on a broadly cooperative basis.

In the meantime, the committee hopes that the percentile scales in Table 2, provisional as they are, will be used, like those in Table 1, to study and to help individuals. It is not suggested that any single test will alone enable college advisers to solve all educational problems. But the indications of these tests may, in combination with other evidence, point the way to fruitful readjustments, if not to ultimate solutions. For example, if a student in elementary or intermediate French is far above the average of the next higher class, the question of advancing him to a higher class, where the work will more nearly challenge his gifts, should be considered. Or, if a student in an advanced class is found to be still below the average of elementary classes, he should be considered for transfer to subjects and courses in which he can advance.

Variability of Achievement in Colleges.—The fifteen colleges included in Chart 1 were chosen to represent the whole range of medians from highest to lowest, and all types of institutions that gave the tests to sohomores and that reported results in time for inclusion in this report. The fifteen institutions include universities, four-year colleges, junior colleges, and teachers' colleges in more than a dozen states, and represent various types and conditions of accreditation and non-accreditation. The indications of this chart are adequately summarized by the paragraphs describing the corresponding chart in the report of the 1932 college testing program.

Chart 1 shows two types of variability; the first is the variability of median scores of different colleges, and the second is the more significant variability of scores of students in individual colleges. While both types of variability indicate the great need for more adequate educational guidance of students, both before and after reaching college, the second type more particularly defines the immediate opportunity of the colleges to serve those young people who have already been admitted to college, and also, in cooperation with the secondary schools, to serve similar groups of young people who are planning, often unwisely, to come to college.

The differences among the colleges whose sophomores participated in this program, as indicated by the differences displayed on Chart 1, are very large indeed, if the combined score of the English, General Culture, and Literary Acquaintance

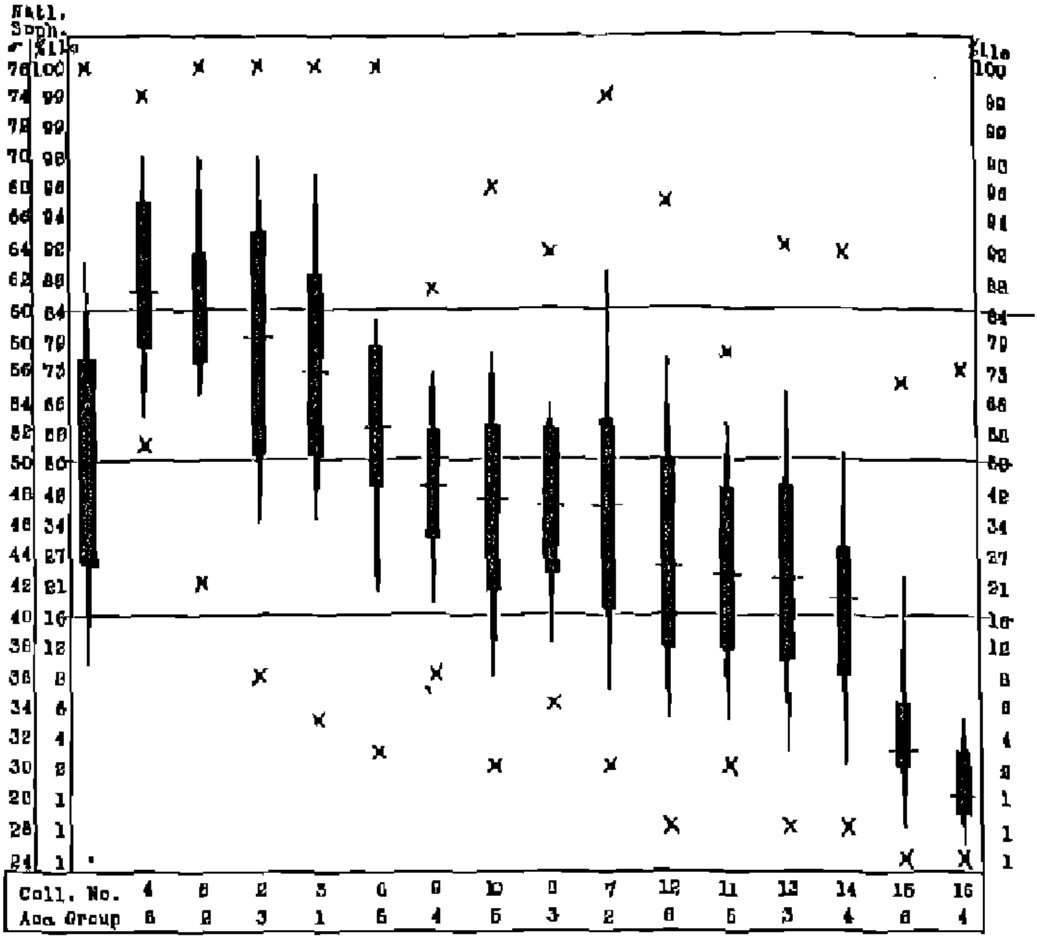


CHART 1.—Variability of achievement in participating colleges as measured by the combined score on the English, literary acquaintance, and general culture tests.

The middle horizontal line shows the national median, and the other two are at the 16th and 84th percentiles of the national sophomore distribution. The first vertical bar represents the national group of 8,537 sophomores from 132 colleges that took this combination of tests, and each of the other bars represents an individual college. The wide portion of each bar represents the range of scores of the middle half of the sophomores in each college. The narrow parts extend to the 16th and 84th percentiles in each college. The lines at the ends extend down to the 10th percentile and up to the 90th percentile. The crosses below the bars represent the lowest scores and those above represent the highest scores in the several colleges. The short cross line at the middle of each bar represents the median score of the college.

While this chart is based entirely on percentiles, the scale has been altered to correspond roughly to a sigma scale, so that vertical distances are approximately comparable. The sigma scale is derived from the percentile scale.

The fifteen colleges included here are chosen to represent the 132 that gave the tests to sophomores. All types of institutions are represented in the fifteen. The numbers of cases vary from 27 to 272. The figures at the bottom of the chart refer to the accreditation groups which are described later in this report.

sections of the sophomore examination means anything at all. While it is clear that the sophomore examination or any other similar examination cannot measure even remotely all of the desirable outcomes of two years in college, the experience of the last decade with objective tests of the sort here used, and our own studies reported later in this section, indicate conclusively that such test results are positively correlated with several of the expected outcomes of college and secondary education. The combination of tests on which Chart 1 is based aggregate something over 1,200 questions. On these 1,200-odd questions, four colleges achieved median scores which are one standard deviation above the national median; that is, more than one-half of the students in these colleges are in the highest 15 per cent of the national group. At the other end of the scale there are six colleges whose averages are more than one standard deviation below the national median. In one or two of these institutions, 80 per cent or more of the sophomores are in the lowest 15 per cent of the national group. So far as the functions measured by the English, General Culture, and Literary Acquaintance tests are concerned, this latter group of colleges has almost nothing in common with the three or four colleges at the high end of the scale. In one group of colleges more than 90 per cent of the sophomores are distinctly above the national median; in the other more than 90 per cent are below the national median.

These indications are confirmed by similar ones from every section of the sophomore examination. This is notably the case with the returns from the English test, which includes sections on usage, spelling, and vocabulary. The relations set forth in Chart 2, based on the total scores on the English test, aggregating 255 items, are practically identical with the relations indicated by each of the three sections of the English test separately.

Chart 2 is particularly interesting because of the availability of comparable English test data on entering college freshmen and on independent secondary school pupils, represented by the five bars at the extreme right of the chart. The median score of 3,268 college entrants in 10 colleges in Sep-

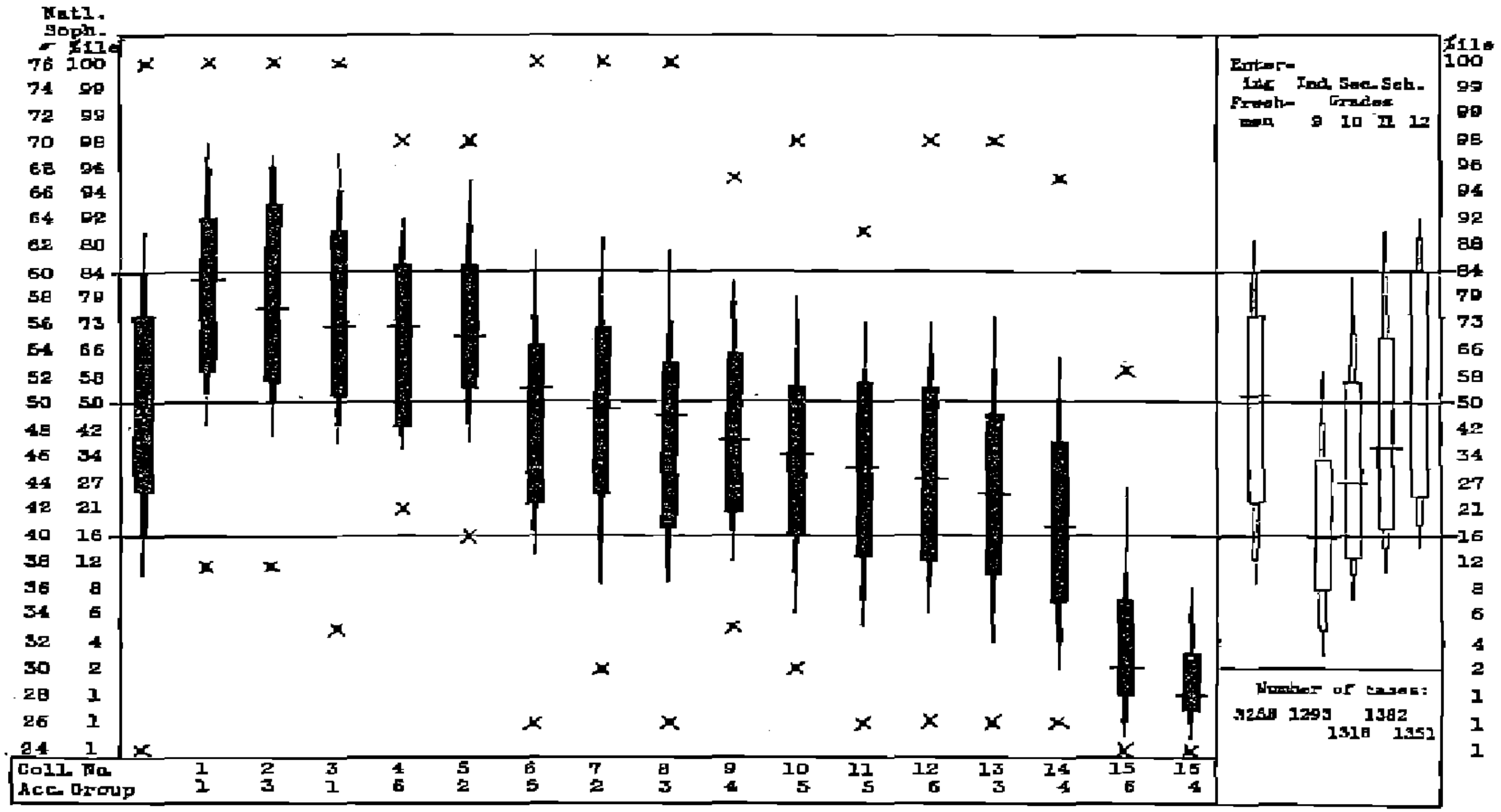


CHART 2. Variability of achievement in participating colleges as measured by the total English test. This chart parallels Chart 1, and is to be read in the same manner. In addition to the 15 colleges of Chart 1 (which appear here in slightly different order), Chart 2 includes a sixteenth college which did not give the literary acquaintance and foreign literature tests, and hence could not be included in Chart 1.

The five bars at the right represent the distributions of scores on comparable Cooperative English tests (Series 1, 1932, and Series 2, 1933) of 3,268 freshmen entering 10 colleges in September, 1932, and of 5,344 pupils in independent secondary schools who took the tests near the end of the ninth, tenth, eleventh, and twelfth grades in April, 1933.

tember, 1932, is slightly above, and the median of 1,351 twelfth grade pupils in independent secondary schools is just equal, to the national sophomore median. The sophomore class medians on the English test are below the median of the ninth grade in five colleges and below the median of the tenth grade in twelve of the 130-odd participating colleges. One of these twelve colleges is fully accredited by a regional association. In one of these dozen colleges, about 95 per cent of the sophomores, and in another about 85 per cent of the sophomores, are below the ninth grade median. In the college which secured the highest median score in the English test, about 15 per cent of the sophomores are below the twelfth grade median; and in another college, which is fully accredited *by the A. A. U., more than half of the sophomores are below* the twelfth grade median. On the other hand, the fourth highest college on the chart is not on any accredited list available to us at this writing.

Variability within Colleges.—These relations are of considerable portent for both the philosophy and practice of institutional accreditation and of educational guidance throughout secondary school and college, and may be even more portentous for educational financing in the not distant future. The differences found in Chart 1 may be explained in part, at least, as due to legitimate curricular differences; but in Chart 2, where we are concerned with basic aspects of the native language, an appeal to curricular differences would appear to be untenable. The spread of scores within a single college, from far below the ninth grade median of independent secondary schools to far above the national sophomore median, is of basic significance. If these indications are no more than approximately correct, the great need suggested is not so much a more ardent concern over the rectification of institutional standards as a humane ardor for finding and serving constructively the needs of individuals in the heterogeneous and largely overlapping masses that are now and will probably inevitably continue to populate both secondary schools and colleges. It is obvious that, with such student bodies as here indicated, mass standards and "average performance," even when relatively high, are not only irrelevant but ironical. It seems equally obvious that no simple and easy changes can be remotely adequate for making the readjustment demanded by the heterogeneity here exposed. Nothing short of a definite abandonment and repudiation of blanket prescriptions and unmitigated mass methods, and a genuine and whole-hearted acceptance of the fact of individual differences and their increasingly obvious administrative and guidance implications, would seem to be a sufficient reason for hopefulness in regard to this crucial social problem. The differences found here among colleges, and the variabilities within colleges, are almost certainly due, partly if not wholly, to differences in original ability which probably can not be equalized by any teaching methods now known.

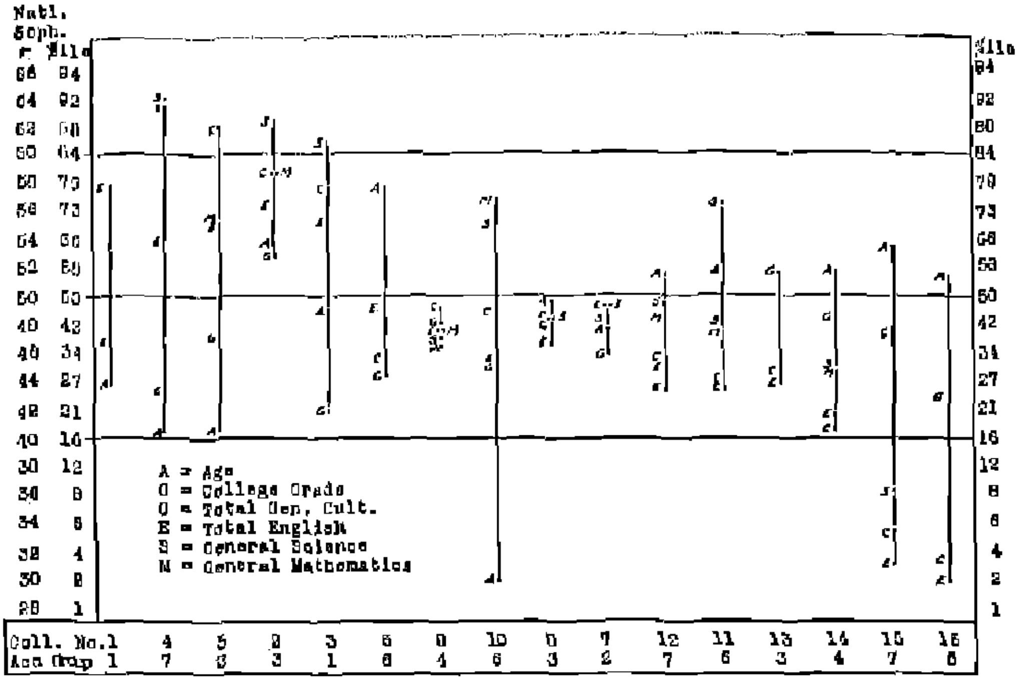


CHART 3.—Variability of college averages on different tests. College means are here graphed in terms of national sophomore percentiles, the scale being arranged as in Chart 1. The identification numbers of the colleges are the same in Charts 1, 2 and 3.

Variability of College Averages on Different Tests.—Chart 3 illustrates graphically how relative standing in a given college varies from one variable to another. In colleges 4, 5, and 10, the sophomores are relatively young, and secure relatively low average college grades, but are relatively high on one or more of the sophomore tests. College 4 is very high in science and general culture, and only a little above the average in English; while College 10 is relatively high in mathematics and science, and below the average in general culture and English. At the right, the colleges with mediocre or very low test averages show relatively high chronological age averages. In College 3 the average college grade assigned to the sophomores is at the 21st percentile, and in College 11 it is at the 73rd perecentile of the national distribution of college grades. Such differences in grading standards indicate the importance of comparable measures for transfer and admission no less than for guidance purposes.

Some of the test differences found in Chart 3 suggest the desirability of detailed analysis of local test results in each participating college.

Distributions of College Averages.—Table 3 confirms for all variables the indications of Charts 1 and 2 that colleges differ widely with respect to achievement of the types measured by the tests. On some of the tests, several colleges secure mean scores which are at or above the 84th percentile, while equal numbers of colleges secure mean scores at or below the 16th percentile. This means that in some colleges roughly half of the sophomores are in the highest 16 per cent of the national sophomore group, and in other colleges roughly half of the sophomores are in the lowest 16 per cent of the national sophomore group. The importance of such differences, in conjunction with the variable grading standards displayed in Chart 3, for admissions officers who are considering applications for advanced standing, and for those who are engaged in constructive educational guidance, can hardly be overestimated. These data emphasize the need for supplementing present appraising devices with instruments which yield more objective and more comparable measures.

Comparison of College Averages by Types and Accreditation Status.—In the report of the 1932 college sophomore testing program, comparisons were made between liberal arts, junior, and teachers colleges, the first two groups being sub-

Nat'l Soph. %iles	Age	Hist. & S. S.	For. Lit.	Fine Arts	Total Gen. Cult.	Eng. Usage	Spell.	Voc.	Total Eng.	Lit. Acq.	Comb. Score	Gen. Sci.	Gen. Math.	Coll. Grade	Nat'l. Soph. %iles
98–100													1		98–100
96– 97						1							1		96– 97
94– 95				2					1				1		94– 95
92– 93												1	1		92– 93
88– 91	2	2	2	3	2		2			1	1	2	6	1	88– 91
84– 87	2		5	3	4					4	3	1	6	1	84– 87
79– 83	4	4	11	8	8	1		2		7	7	3	5	1	79– 83
73– 78	5	5	5	10	5	3		7	5	5	8	4	4	2	73– 78
66– 72	7	15	17	9	11	7	3	5	14	12	6	11	6	5	66– 72
58– 65	15	22	16	17	22	20	19	18	15	14	20	13	9	8	58– 65
50– 57	18	20	20	20	22	24	18	20	18	31	20	15	8	23	50– 57
42– 49	23	22	15	15	12	20	46	29	28	11	19	17	9	25	42– 49
34– 41	15	12	10	8	12	25	22	25	23	21	9	19	3	17	34– 41
27– 33	15	11	11	18	14	17	14	14	17	11	13	5	5	17	27– 33
21– 26	14	4	9	6	5	6	6	5	5	6	6	5	1	13	21– 26
16– 20	8	2	3	1	2	4	1	2	2	4	4	1		4	16– 20
12– 15	3	3	1	4	3	2	1	2	1		1	2		2	12– 15
8– 11		1		1		1	1	1	2	2	1	3	1		8– 11
6– 7				1	1						1				6– 7
4– 5		1			1			2		1					4– 5
2– 3	1	2			1	1		1	2		2				2– 3
1						1									1
TOTAL...	132	126	125	126	125	133	133	133	133	130	121	102	67	119	

TABLE 3.—Distributions of college sophomore averages. The sophomore means of all colleges for which data were available are here distributed in terms of national sophomore percentiles. The percentile scale has been altered as in Charts 1, 2, and 3, so that the intervals correspond approximately to a sigma scale. The vertical distances are therefore roughly comparable.

divided into men's, women's, and coeducational colleges. Those comparisons showed (1) great variability of averages within each group; (2) superiority of the women's colleges in English and General Culture, and inferiority in General Science; and (3) for the liberal arts, junior, and teachers colleges an approximate equality of college sophomore averages on most tests, both as to central tendency and variability of averages.

When the 1933 college averages are grouped in the same way, the indications are closely similar to those just noted for the 1932 averages. Hence, in the present report the comparison of types of colleges will be subordinated to the comparison of groups of colleges according to accreditation status.

A study of the accredited lists of the Association of American Universities (November, 1932), of the North Central Association (June, 1932), of the Middle States Association (November, 1932), of the United States Office of Education (1930, No. 19), and of various other regional and state associations, enabled us to classify the institutions participating in the 1933 program in the following groups:

I. Institutions accredited by the American Association of Universities, whose names include the word "university."
II. Colleges accredited by the American Association of Universities.
III. Colleges accredited by a regional association.
IV. Colleges accredited by a state association or a state university, and colleges not appearing on any four-year college list.
V. All junior colleges, whether or not on any accredited list, and some other colleges accredited by a regional or state association or a state university, as a junior college, two-year college, or three-year college.
VI. All teachers' colleges.

The distributions of averages of accredited and non-accredited colleges in groups IV, V, and VI were so similar that they have been merged to save space. In group V some institutions were on regional association lists, others only on state lists, and others on no list available to us; but the distributions of their averages were so similar that all such institutions were placed in one group.

These groups are admittedly rough, and probably inaccurate except for the Association of American Universities and regional lists. The absence of accredited lists in the New England region, and in many states, and the uncertainties regarding some of the junior and teachers colleges, make an exact grouping of colleges according to accreditation status difficult if not impossible.

The relative standings of the six groups cannot be considered as commentaries on the standards of the various accrediting agencies. The reason for this reservation is obvious: the institutions participating in the 1933 college testing program should not be assumed to be representative samples of all the institutions accredited by each agency or group of agencies until credible evidence of such representativeness is at hand. Such evidence is not available to us. It must also be kept in mind that the tests used do not furnish any direct evidence on many important types of college achievement.

With these reservations in mind we may turn our attention to Table 4, which shows distributions of college averages on the English and General Science tests, and average scores on the combined English, General Culture, and Literary Acquaintance tests.

The median averages on the English test and on the combined score indicate that the six accreditation groups are approximately in the order in which they appear in the table, except that group IV is the lowest in the English test. The medians for the two A. A. U. groups are clearly above all the other groups. The differences between the English median averages of the regional and state accredited colleges, and the junior and teachers colleges are negligible. The negligible differences between the accredited and non-accredited colleges and junior colleges in groups IV and V have already been noted above. On the General Science test the A. A. U. uni-

Tests	Total English						Combined Score						General Science						
Accreditation Groups	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6	
Percentiles																			Percentiles
98–100																			98–100
96– 97																			96– 97
94– 95						1													94– 95
92– 93																		1	92– 93
88– 91												1			1			1	88– 91
84– 87							1	1			1		1						84– 87
79– 83								3	1	1	2			1	1		1		79– 83
73– 78	2	1	1		1		1	1	3	3			1		1		2		73– 78
66– 72	1	5	3	1	2	2		3	1		1	1	1	3	3		3	1	66– 72
58– 65	1	5	3	3	3		4	3	5	3	4	1	2	4	2		3	2	58– 65
50– 57	2	4	3	2	4	3	1	6	3		7	3		4	3		7	1	50– 57
42– 49	2	6	4	2	11	3		6	6	3	4		1	3	4	2	5	2	42– 49
34– 41		4	7	3	8	1			1		6	2	1	4	3	5	3	3	34– 41
27– 33			4	2	9	2			2	2	7	2		1		2	2		27– 33
21– 26				1	2				2	1	2	1				3	2		21– 26
16– 20			1	2		1				3	1	1				1			16– 20
12– 15				1												1		1	12– 15
8– 11				1	1						1				1		1	1	8– 11
6– 7										1									6– 7
4– 5																			4– 5
2– 3				1		1				1		1							2– 3
1																			1
No. of Colleges........	8	25	26	19	41	14	7	23	24	18	36	13	7	20	19	14	29	13	

TABLE 4.—Distributions of college sophomore averages by accreditation groups. College means based on all available sophomore returns are plotted in terms of national percentiles. In this chart the percentiles are grouped to correspond approximately to a sigma scale, so that vertical distances are roughly comparable, as in preceding charts and tables. The six accreditation groups are as follows: 1, Universities accredited by A.A.U.; 2, Colleges accredited by A.A.U.; 3, Colleges accredited by a regional association; 4, Colleges accredited by a state association, or approved by the state university, or not on any accredited list; 5, all junior colleges, whether accredited or not, and a few other colleges accredited as junior colleges, two-year or three-year colleges; 6, all teachers colleges. The irregularities in numbers of colleges in corresponding groups are due to the fact that all colleges did not use the same combination of tests. See text for further explanation.

versity group median average is highest, the state and "no accreditation" group lowest, and the other four groups approximately equal.

The variability of the averages in each group is of far greater significance than the differences in median averages, especially in view of the uncertain samplings involved in each group. Quite regardless of sampling, the distributions of averages show that in some accredited colleges the sophomore classes achieve an average score on a basic English test below the average of sophomores in colleges not on the accredited lists, while the sophomore classes in some colleges that appear on no accredited list achieve averages on the same English test far above averages of sophomores in accredited colleges. One state accredited institution secures an average at the 19th percentile on the English test, while an institution not on any accredited list achieves an average on the same test at the 64th percentile of the national sophomore group. One teachers' college not on any accredited list achieves an average score on the combined English, General Culture, and Literary Acquaintance tests higher than the average of any accredited college. Less striking examples could be multiplied indefinitely.

It is to be noted, however, that no participating institutions accredited by the A. A. U., and only a few accredited by a regional association, secure averages on any of the tests very far below the national sophomore median.

However, it is only when we consider the overlapping of distributions of individual scores for accredited and non-accredited institutions that the inadequacy of institutional accreditation for purposes of admission and transfer, and, (more important) for purposes of constructive educational guidance, becomes fully apparent. Chart 4 shows graphically the distributions of individual student scores in the six groups of colleges described above. A glance at Chart 4 suffices to show that, in spite of fairly consistent differences between the six accreditation groups, many students in the lower accreditation groups, including non-accredited institutions, are far above the average of the highest accreditation group, while many stu-

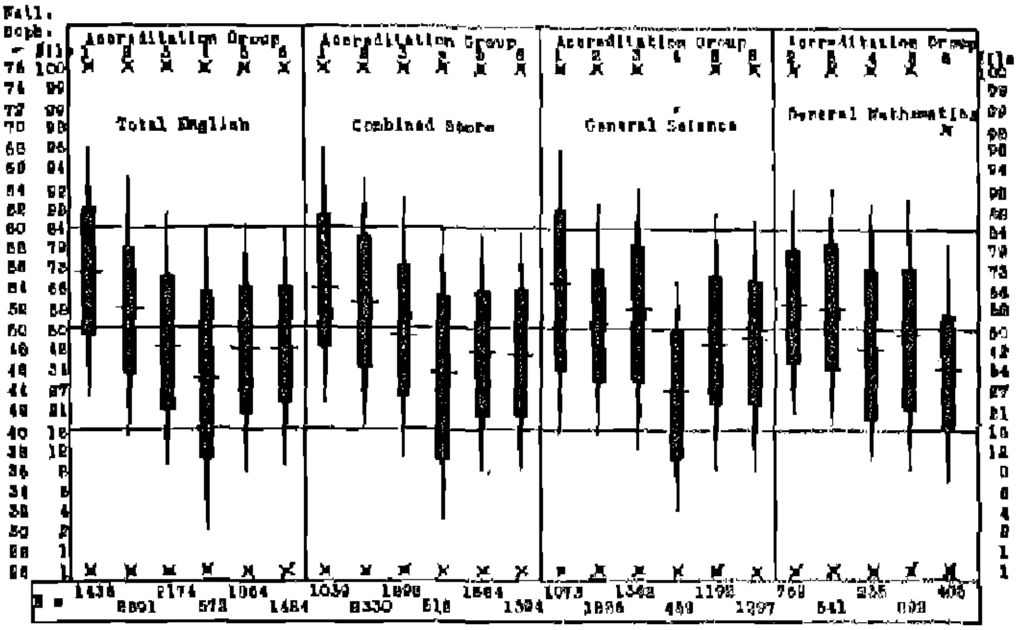


CHART 4. Comparison of accreditation groups. Graphs of distributions of sophomore scores in colleges grouped according to type and accreditation status. The colleges and accreditation groups here are the same as in Table 4. The irregularities in numbers of cases in corresponding groups are due to the fact that several colleges used different combinations of tests. All available cases in each group have been included. (See text for detailed description of accreditation groups.)

dents in accredited colleges are far below the average of the lower accreditation groups and of non-accredited colleges. According to English test scores, more than one-fourth of the sophomores in the highest accreditation group are below the national sophomore average, and about one-fifth are below the average of accredited and non-accredited junior colleges and teachers' colleges. On the other hand, one-fourth of the sophomores in the three lowest accreditation groups are above the average of the second highest accreditation group, one-fifth are above the average of the highest accreditation group, and at least 5 per cent are in the highest quarter of the highest accreditation group. The overlappings of the distributions of combined English, General Culture, and Literary Acquaintance test scores, and of the General Science and General Mathematics scores, are even more pronounced than in the case of the English test scores. It is obvious that, if transfers and admission to graduate schools are managed strictly in accordance with accreditation status, many inferior students would be accepted and many superior ones would be rejected. The indication is plain that justice for individuals, as well as for institutions, demands that institutional accreditation should be supplemented by individual appraisal on a basis sufficiently objective to maintain a modicum at least of comparability.

Comparison of College Averages on the Foreign Language Tests.—Table 5 shows distributions of college averages on each of the foreign language tests for indicated college credit

Score	French			German			Spanish			Latin				Score
	Years of College Credit													
	1-1½	2-2½	3-3½	1-1½	2-2½	3-3½	1-1½	2-2½	3-3½	1-1½	2-2½	3-3½	4+	
270												1		270
260								1	1					260
250				1										250
240														240
230			1											230
220			1	1		1						2	2	220
210			1			3		1	1		1		1	210
200	I.S. Gr. 12		3		1					1		1	2	200
190	Fr. 4 yrs	1	5		1	1			1			2	2	190
180		1	5			3	1		1				1	180
170	I.S. Gr. 11	3	1		1	1		1	1		2	1	3	170
160	Fr. 3 yrs 1	2	4			1		3	2		1	3	1	160
150	2	5	3		1	3		1			1	5	3	150
140	3	5	2		2	1	2	2	2		1	3		140
130	I.S. Gr. 10	6	6	1	4			5	5	1	3	2		130
120	4	7	2	1	2	1	1	4			2	3	2	120
110	2	6	5	2	5		2	3	4	6	5	1		110
100	7	12	2	2	3	1	3	2	1		4		2	100
90	Fr. 2 yrs 1	4	1	1	5		2		1	1	3	1		90
80	7	3		5	6	1	5	3		1	1	1		80
70	5	6		4	4		3	3			2			70
60	5	1		7	3		2	1			1			60
50	9			3	1	1	5	2		1				50
40	3			6	2		3			1				40
30	2			7	4	2	1			4				30
20	2			3	3		3			6	1			20
10	2			1	1									10
0														0
Total	50	67	42	47	49	20	33	31	20	21	28	26	20	Total

TABLE 5.—Distributions of college averages on the foreign language tests for indicated college credit groups. In computing college credits, one high school year was considered equivalent to one-half college year of credit. The numbers of cases on which the college averages are based range from 1 to 70; if all averages based on fewer than 5, or even 10, cases had been excluded, the relations indicated in this table would not be noticeably different. In the French test columns, the dotted lines indicate tenth, eleventh, and twelfth grade independent secondary school medians, and the dash lines indicate medians of entering college freshman groups that had had two, three, or four years of high school French.

The table is to be read as follows: In the 1-1½ year column for French, one college secured an average score between 160 and 170; two colleges secured averages between 150 and 160; and so on to the bottom of the column where it appears that two colleges secured averages of between 10 and 20 score points. Referring to the dotted horizontal line, it appears that in most of the colleges the 1-1½ year college credit groups secured averages below the tenth grade median in a group of highly selected independent secondary schools, while a majority averaged below the dash line, or below the average of entering college freshmen who had had two years of high school French.

The vertical brackets at the right of each distribution indicate the 25th, 50th, and 75th percentiles from Table 2.

groups. The numbers of cases on which the averages actually included in the table are based are quite small, ranging from 1 to 70 or more, but since the averages (or single scores, as the case may be) represent the tested achievement of groups or of individuals officially placed in defined credit groups by the colleges, Table 5 seems to afford significant evidence on the variable meaning of college credits in the foreign languages.

In Table 5 we are concerned with both institutional accreditation and individual appraisal. It is apparent that even in a sequential subject-matter like French, groups that are officially equal in training or credit status are extremely variable in tested achievement. The distributions of college averages for the three credit groups overlap approximately in the same way and to the same extent as distributions of individual scores for successive credit groups or classes in a single institution. In several colleges the three-year groups are below the two-year average, and in several colleges the two-year groups are above the three-year average. In a few colleges the average for third-year students was below the average for second-year students in the same college. The positions of the dotted and dashed lines in the French test columns afford eloquent comparisons of achievement in the foreign languages in colleges and highly selected secondary schools. The dash lines show averages of entering college freshmen, mostly from public high schools, who had had 2, 3, and 4 years of high school French. These entering freshmen took the Cooperative French test as a placement test in September, 1932, in 7 colleges. These 7 colleges probably attract superior students, but, even so, it is not without significance that the 2, 3, and 4-year *high school* credit groups secure averages above those of the 1–1½, 2–2½, and 3–3½ year *college* credit groups, respectively. In more than half the colleges the 1–1½ year college credit groups secure averages below, and in several far below, the 2-year high school credit group of entering freshmen. In less than one-sixth of the colleges do the 2–2½ and 3–3½ year college credit groups secure averages above the 3 and 4-year high school credit

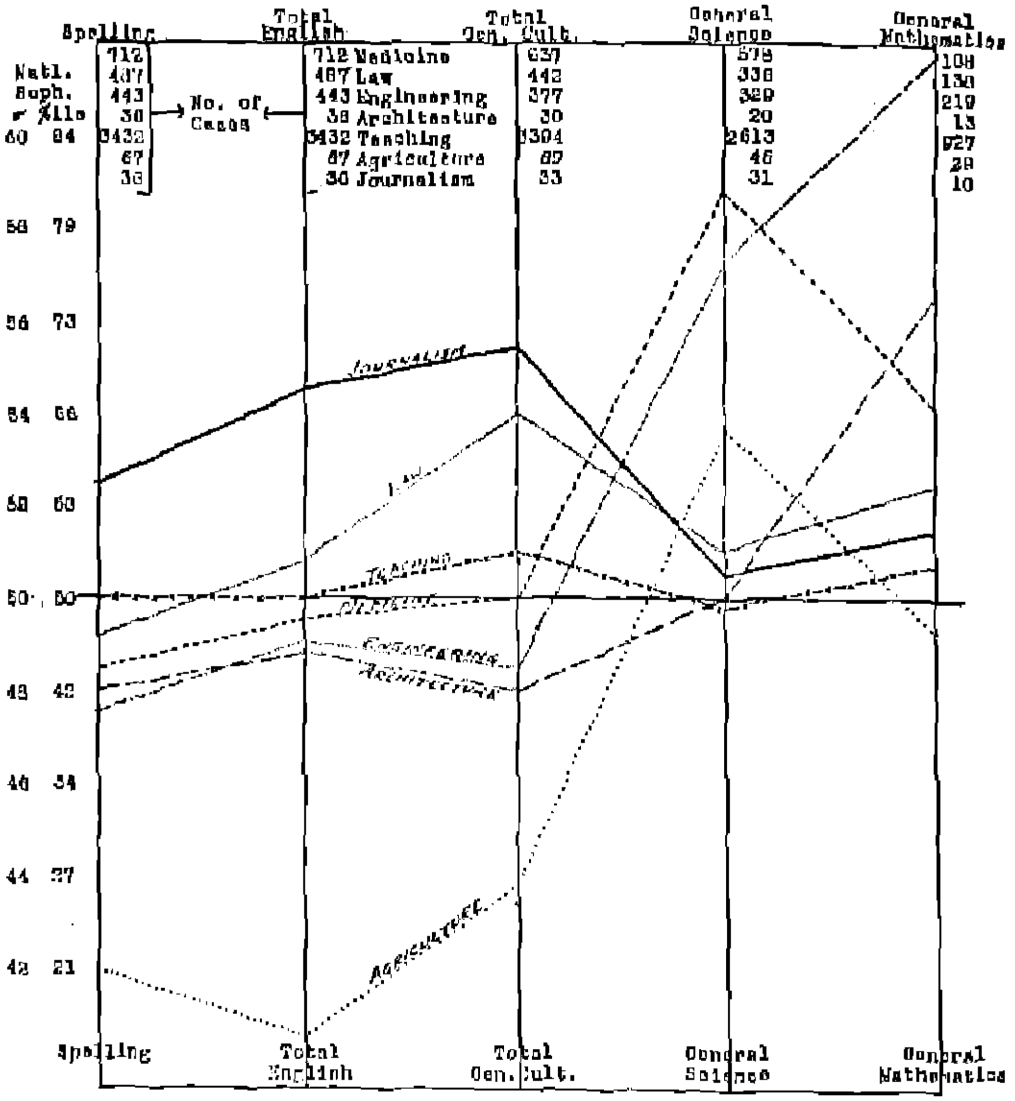
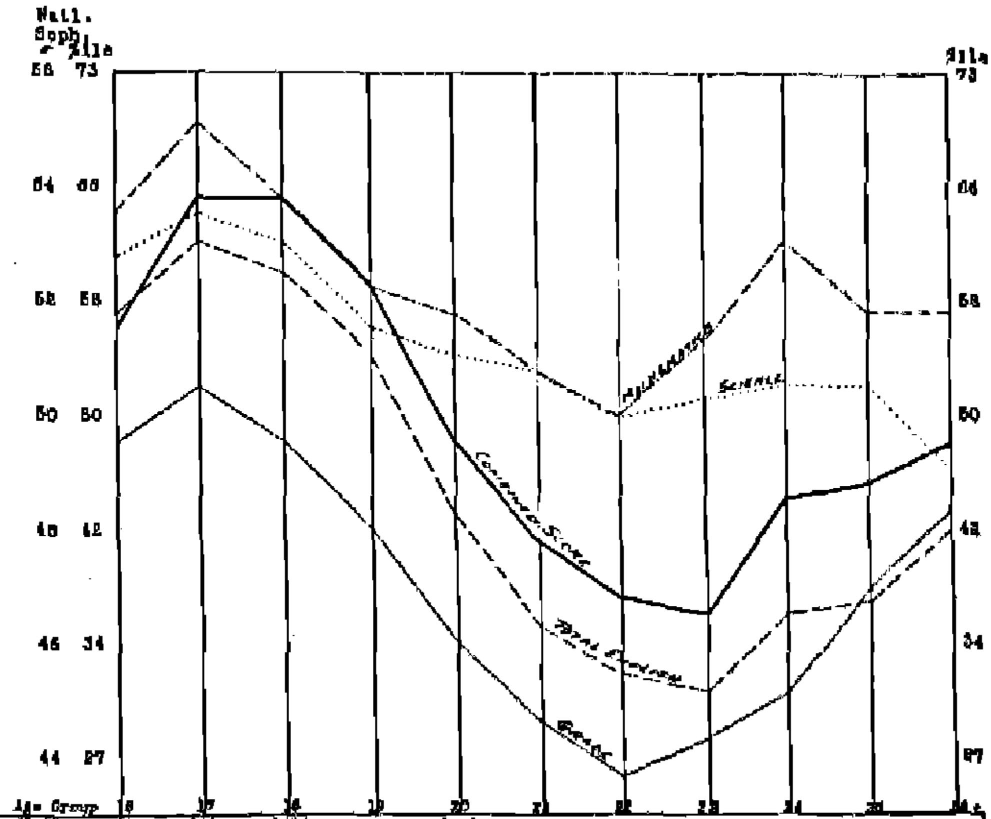


CHART 5.—Comparison of professional goal groups. Graphs of means on indicated tests of college sophomores who reported their professional goals. The averages are graphed in terms of national sophomore percentiles arranged as in Chart 1.

groups. The dotted lines, representing the tenth, eleventh, and twelfth grade class averages in independent secondary schools, are far above the averages of the corresponding college credit groups. Not all the colleges in Table 5 are accredited, but the relationship between accreditation status and test averages is approximately the same here as in Table 4 and Chart 4 above.

Table 5 reinforces the suggestion made above that institutional accreditation needs to be supplemented by individual appraisal and at the same time calls attention strikingly to the need for more objective and comparable measures for purposes of both institutional and individual appraisal.

Comparison of Professional Goal Groups.—Chart 5 shows graphically indicated test averages of sophomores grouped according to their reported professional goals. In order to avoid a multiplicity of lines in the chart, the averages of two groups are omitted, Business and Ministry. The averages of the Business and Ministry groups on all variables are at or slightly below the national median, with the single exception that the Ministry group average on the General Culture test is practically equal to the average of the Law group. The



Age Group	16	17	18	19	20	21	22	23	24	25	26+
N Orie.	10	160	1610	3306	3030	797	577	196	105	69	134
Comb.Sc.	16	197	1448	3110	2041	746	535	104	100	58	111
Gen.Cul.	16	176	1100	1530	1741	601	331	101	97	60	105
Gen.Math.	8	62	501	909	684	196	120	67	57	51	52
Tot.Eng.	19	277	1786	2611	2200	500	404	223	158	71	141

Chart 5.—Comparison of age groups. Means of chronological age groups of sophomores on indicated variables, graphed in terms of national sophomore percentiles arranged as in Chart 1. Since the national distributions show varying degrees of positive and negative skewness, the means as here graphed appear too high for some variables and too low for others. However, it is the direction of the lines, rather than their height on the chart, that is significant here.

average ages of all professional goal groups are close to the national median, except for the Ministry and Agriculture groups, which are roughly one year older.

Chart 5 affords several interesting contrasts and parallelisms. The lines connecting the averages of the medical and agricultural aspirants are practically parallel throughout, but the medical averages are roughly one sigma above the agriculture averages throughout. A general parallelism obtains between the lines for engineers and architects, except that the architects are considerably below the engineers in mathematics, and very much below in general science. In contrast with these groups, the journalists are relatively high in spelling, English, and General Culture, and mediocre in General Science and General Mathematics. Unlike all other groups, the law and teaching group lines hold a generally mediocre level across the chart, the law group being superior to the teaching group on all tests except spelling. The relatively smaller numbers of students taking the mathematics test suggest caution in interpreting the averages graphed at the extreme right of the chart.

Comparison of Age Groups.—Chart 6 shows the familiar negative correlation between chronological age and tested achievement. The negative correlation is fairly consistent for all variables from age 17 to 23, after which the relation becomes slightly positive; but the relation between age and average scores in General Science and General Mathematics is not far above zero throughout.

In Chart 6 means are graphed in terms of national percentiles, and since the national distributions show varying degrees of positive and negative skewness, the lines connecting the averages of the different tests are rather widely separated, some appearing too high and some too low, according to the degree and direction of skewness. Similar but less obvious discrepancies appear in some of the other charts. Throughout this report an effort has been made to make all comparisons in terms of national sophomore percentiles, partly because of the more widespread familiarity with the percentile scale, and partly because of the lesser expense of preparing the report in this way. In calculating the averages of sub-groups, as of a college, or an age or professional group, it has been less expensive and more expeditious to calculate means rather than medians, hence the unusual procedure of charting and tabulating means in terms of percentiles, arranged to approximate a sigma scale, as in Chart 1. However, the apparent distortion would have been as great if we had derived percentile from sigma scales, instead of the reverse; and for those who may wish to make more exact statistical analyses, the national means and sigmas for each variable are given in Tables 1 and 2.

Comparison of Men and Women Sophomores. The averages of men and women sophomores give indications which are in practically complete harmony with the indications of the 1932 report; hence detailed data will not be presented here. The women sophomores who took the tests are superior to the men who took the tests in all variables except General Mathematics, General Science, and Chronological Age. The averages of the women on these variables are roughly one-half sigma below the averages of the men. The superiority of the women in Average College Grade is not as great as in most of the tests—about 0.2 as compared with 0.4 sigma.

Relations between 1932 and 1933 Standings of Colleges That Participated in Both Programs.—The fact that 66 colleges participated in both the 1932 and 1933 programs makes possible some very interesting comparisons of the relative standings of the 1932 and 1933 sophomore classes in these colleges. The relations are summarized in terms of correlations in Table 6.

The highest correlation is that for chronological age, and the lowest that for college grade. The highest of the test correlations are those for Total English and the Fine Arts section of the General Culture test; the lowest are those for Foreign Literature and General Science. The relative standings of the 1932 and 1933 sophomore classes in these colleges are more alike according to averages on all or any one of the tests than according to average college grade.

TABLE 6.—Correlations between 1932 and 1933 sophomore averages of colleges that participated in both programs. Data on some of the variables were not available for all colleges.

TABLE 6

Variable	N (No. of Pairs of College Averages)	$r_{32\text{-}33}$
Chronological Age	62	0.82
College Grade	55	0.44
Tests:		
Total English	63	0.68
History and S. S.	61	0.65
Foreign Literature	60	0.54
Fine Arts	61	0.68
Combined Score	59	0.59
General Science	54	0.55

IV. COMPARISON OF COLLEGE CLASSES

College Class Percentiles.—From some points of view the most interesting and significant data yielded by the 1933 testing program are those which enable us to compare two or more classes in the same college or group of colleges. About two dozen colleges tested significant numbers of students in at least two classes, but only five colleges tested all, or nearly all, students in all four classes. Abbreviated percentiles for the consolidated classes in these five colleges are shown in Table 7. These percentiles are given for their general interest and to enable these five colleges to study their individual students in the four classes in terms of their own class percentiles. The small numbers of colleges and cases involved in Table 7 make these percentiles less significant than those in Table 1, but they may be of service in special studies that may be undertaken in the five colleges that have made this interesting table possible. The committee hopes that larger numbers of colleges will test all four classes in the 1934 and succeeding testing programs.

Overlapping of College Classes.—The overlapping of college classes indicated in Table 7 is shown graphically in Chart 7. In general, the class medians rise from freshmen to junior classes, the senior median in all variables being lower than the junior median, and in General Mathematics lower

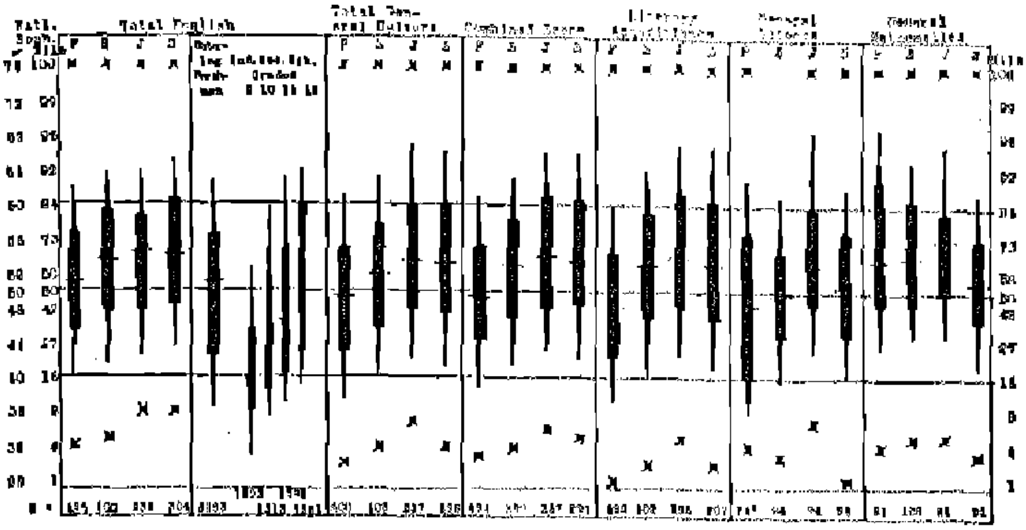


Chart 7.—Comparison of college classes. Graphs of scores on indicated tests of freshmen, sophomores, juniors, and seniors in the five colleges that tested all four classes. The class percentiles are graphed in terms of national sophomore percentiles arranged as in Chart 1. All available cases on each test have been included. Varying numbers of the five colleges either omitted or made optional the General Science and General Mathematics tests in one or more of the classes; hence the indications from these tests should be taken with caution.

For comparative purposes, the distributions of comparable English test scores of entering college freshmen and of ninth, tenth, eleventh, and twelfth grade classes in independent secondary schools are graphed alongside the English test graphs of the college classes. (Cf. Chart 2.)

even than the freshman medians. On the English test, the senior median recedes from the junior median less than on any other test; but even this slight recession is in strong contrast with the large advance made by the twelfth over the eleventh grade in independent secondary schools.

Of far greater significance, however, is the fact that even the largest differences in medians are small in comparison with the variability of the classes, and the further fact that the variability is approximately equal in all classes. In a basic subject matter such as English there are about as many very good students in the freshman as in the senior class, and nearly as many very poor students in the senior as in the freshman college class. The near-equality of the class medians might appear acceptable if the senior distribution were truncated at the bottom. The presence in the senior class as in the freshman class of nearly the same proportion of students

Test	Lit Acq. + Gen. Culture Combined Score, English +				Total English				Total General Culture				
No. of Cases....	494	399	237	291	496	400	239	304	500	403	237	296	
Mean..........	368	409	436	431	150	159	160	163	154	172	192	188	
Sigma.........	118.5	120.9	132.6	130.6	35.7	35.7	34.7	34.3	62.2	69.1	77.4	75.3	
Class..........	Fresh.	Soph.	Junior	Senior	Fresh.	Soph.	Junior	Senior	Fresh.	Soph.	Junior	Senior	
Percentiles													%iles
100	760	790	920	910	240	240	240	240	410	430	530	520	100
98	642	660	711	700	219	220	219	224	307	329	572	370	98
93	556	592	636	633	200	206	208	209	265	282	318	310	93
90	531	562	608	605	196	201	201	205	246	266	304	290	90
84	489	534	558	561	187	195	194	198	220	239	263	259	84
80	463	518	543	541	181	191	190	195	207	230	251	247	80
75	442	492	532	524	176	187	186	191	194	217	235	235	75
70	423	471	503	503	171	182	182	185	184	205	224	224	70
60	390	430	466	463	161	173	175	175	164	183	197	200	60
50	357	407	429	421	151	163	167	166	148	166	182	181	50
40	332	378	391	391	142	152	156	157	130	148	162	162	40
30	299	351	360	357	130	141	144	148	113	128	150	140	30
25	285	326	337	341	125	136	136	139	103	120	137	132	25
20	266	298	314	317	120	130	125	132	93	110	125	123	20
16	247	278	292	297	115	118	119	124	86	103	115	114	16
10	219	248	267	258	101	107	111	114	75	89	102	93	10
7	205	232	251	240	93	101	104	109	67	80	94	79	7
3	168	194	207	207	79	86	91	95	51	66	77	64	3
1	136	149	176	169	64	70	80	80	37	52	64	53	1

TABLE 7.—Freshman, sophomore, junior, and senior class percentiles based on all returns from five colleges that gave the tests to all four classes.

TABLE 7—*Continued*

Test	Literary Acquaintance				General Science				General Mathematics				
No. of Cases....	498	402	238	297	245	94	84	95	91	106	61	72	
Mean..........	64	78	83	81	42	42	55	47	53	50	53	43	
Sigma.........	29.3	29.6	31.8	32.3	24.8	18.8	28.4	24.6	27.5	23.7	24.0	23.2	
Class..........	Fresh.	Soph.	Junior	Senior	Fresh.	Soph.	Junior	Senior	Fresh.	Soph.	Junior	Senior	
Percentiles													%iles
100	160	160	170	170	126	98	172	157	120	117	114	130	100
98	136	144	154	150	105	94	134	123	115	109	109	128	98
93	109	122	132	130	85	75	103	89	103	90	97	77	93
90	102	117	126	125	77	70	96	74	97	82	90	70	90
84	94	108	116	116	71	60	81	66	83	73	77	59	84
80	89	104	112	110	62	56	75	60	78	69	71	57	80
75	83	99	107	104	58	52	66	58	74	66	62	52	75
70	77	92	102	99	53	47	61	55	64	59	60	47	70
60	67	84	88	87	45	42	56	50	55	54	55	44	60
50	60	77	81	78	37	40	47	42	45	46	52	37	50
40	54	70	73	70	30	36	44	38	40	40	44	34	40
30	46	62	64	62	24	31	41	35	35	35	39	30	30
25	42	57	60	57	21	30	37	30	32	32	35	28	25
20	37	52	53	52	19	27	32	30	29	29	33	26	20
16	34	46	48	47	17	26	30	28	27	27	28	24	16
10	29	37	42	39	15	20	25	21	23	25	25	20	10
7	24	33	38	35	13	19	23	19	19	22	25	18	7
3	15	24	31	29	12	14	19	12	14	19	13	14	3
1	10	15	21	16	10	9	13	1	11	12	12	10	1

below the tenth grade median for independent schools is enough to give one pause; and the fact can hardly be explained except on the grounds that time-serving rather than achievement furnishes the basis of promotion from freshman to senior class. It is more than probable that these students achieve social and some intellectual values in passing from the freshman to the senior class; but it seems clear that whatever the nature of these values may be, they are not associated with or

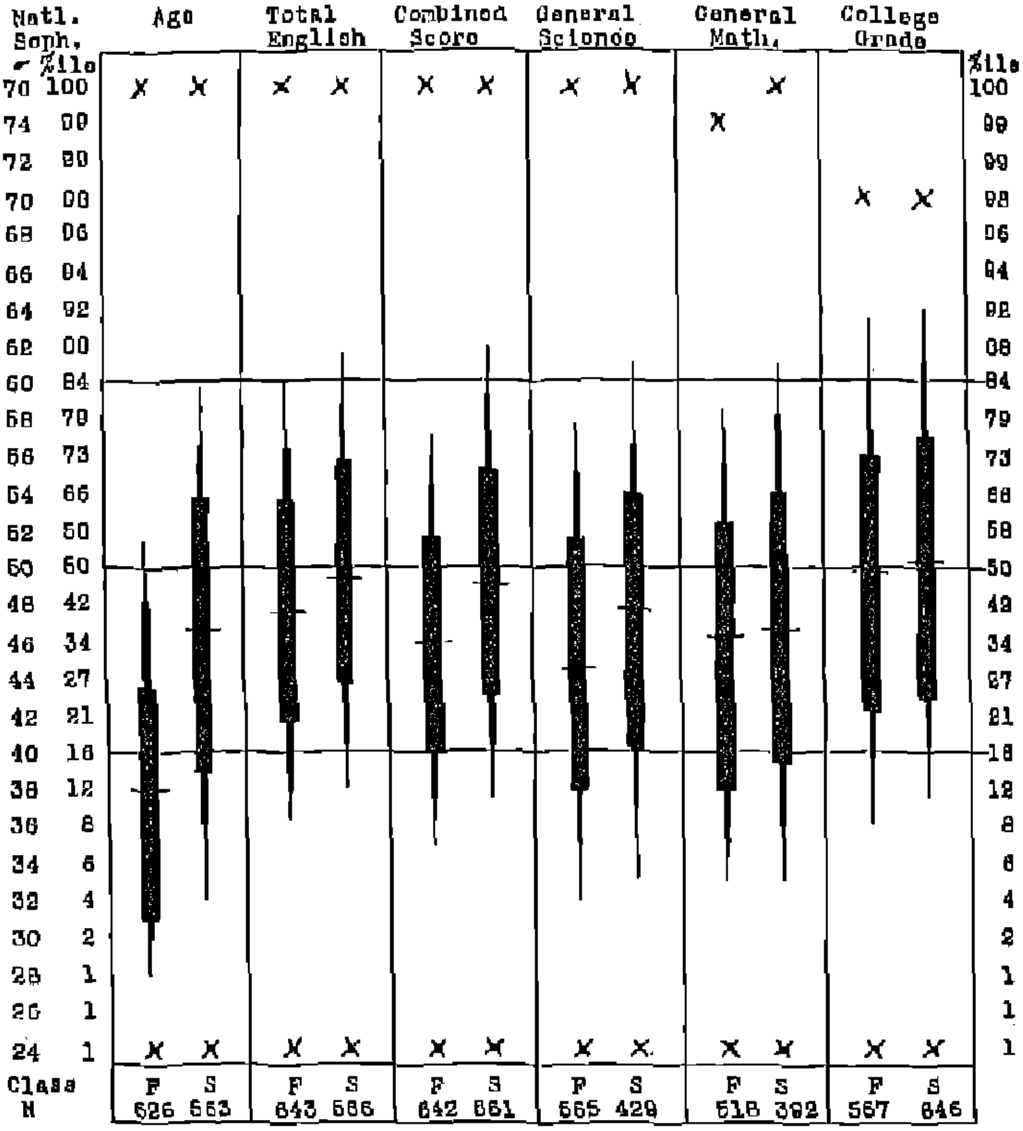


CHART 8.—Comparison of college classes. Graphs of the class distributions of scores in 9 junior colleges that tested both classes. The class percentiles are graphed in terms of national sophomore percentiles arranged as in Chart 1. All available cases in each class in the 9 junior colleges have been included. Several colleges omitted one or more of the tests in one or both classes.

dependent upon the type of literacy measured by the English test used in this program. Nearly a third of the college seniors in these five colleges are below the median of the freshmen, more than a fourth of the seniors are below the twelfth grade independent school median, and more than 10 per cent of the seniors are below the tenth grade median. On all the tests represented in Chart 8, between one-third and one-fourth of the upper classes are below the freshman median, and equal proportions of the freshmen are above the highest upper class median, with approximately equal numbers of extremely good and extremely poor students in each of the four classes.

Overlapping of Classes in Junior Colleges.—The indications of Chart 7 are confirmed by those of Chart 8, which shows graphically the class distributions of nine junior colleges that tested both freshman and sophomore classes. On all variables, the sophomores show medians higher than those of the freshmen, although the differences are generally small, except for chronological age.

Comparison of Class Averages of All Colleges That Tested Two or More Classes.—The averages on the English test and on the Combined Score of the individual colleges in Charts 7 and 8, and of several other colleges that tested two or more classes, are shown graphically in Charts 9a and 9b. In only one of the five colleges that tested all four classes do the class averages rise without recession from freshman to senior class. But in none of these five colleges are the differences between the averages large in comparison with the variability within classes displayed in Charts 7 and 8, or in comparison with the differences between corresponding class averages in different colleges. The upper class averages in several colleges are below the lower class averages in other colleges on one or more of the tests involved in Charts 9a and 9b. The indications from other tests are very similar, hence charts of their results will not be presented.

The evidence from all these tests, as summarized in Tables 4, 5, and 7 and Charts 4, 7, and 8, indicates that the basis of credits and of classification of students within colleges is very similar to the basis on which institutional accreditation is

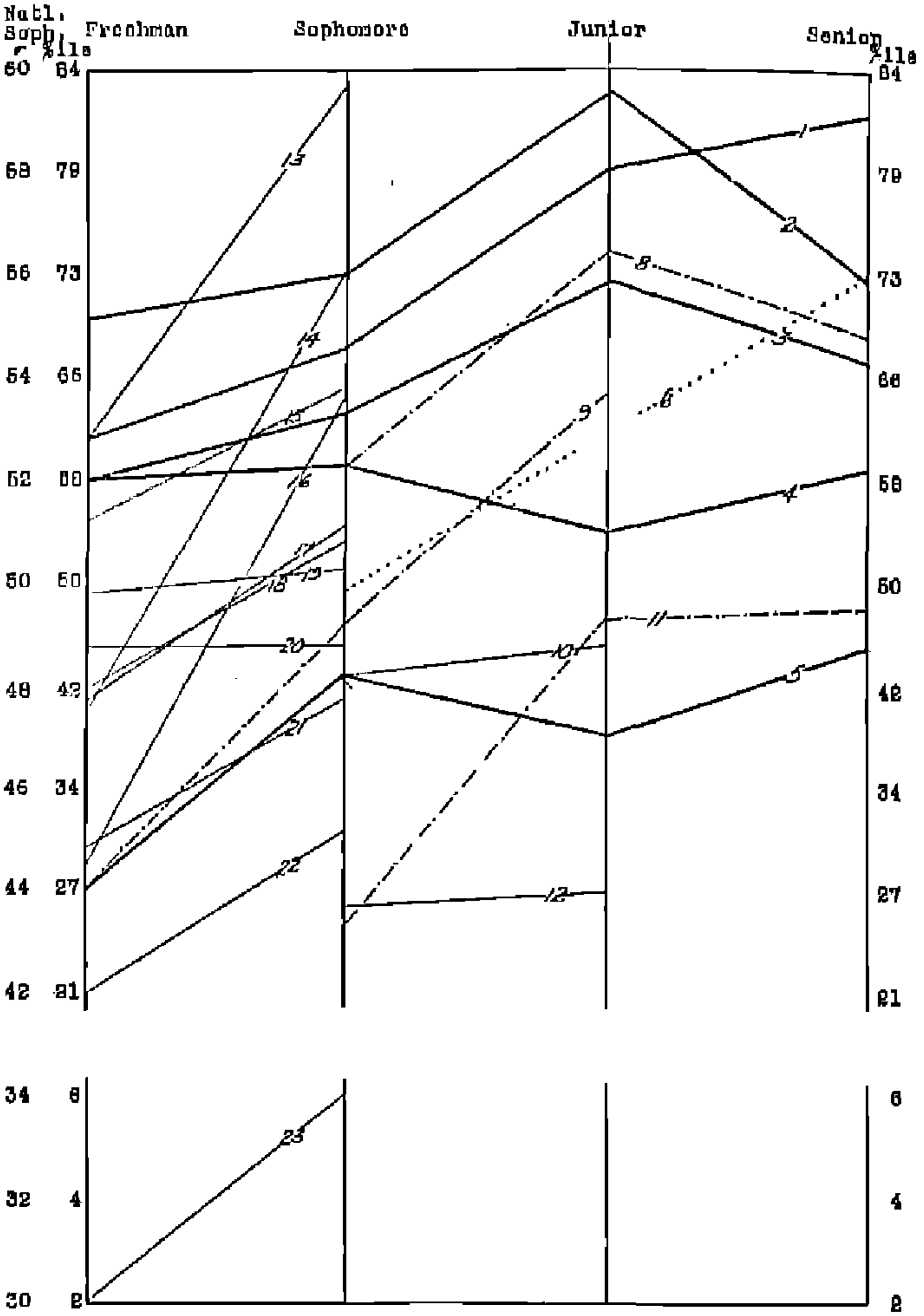


CHART 9a.—Graphs of class averages on the combined score of the English, General Culture, and Literary Acquaintance tests of individual colleges that tested two or more classes. The college class means are graphed in terms of national sophomore percentiles, arranged as in Chart 1. As in all other charts, the identification numbers of the colleges are arbitrarily assigned. Colleges 1 to 5 tested four classes; college 6 tested sophomores and seniors; colleges 8, 9, and 11 tested three classes; all other colleges on the chart tested only two classes.

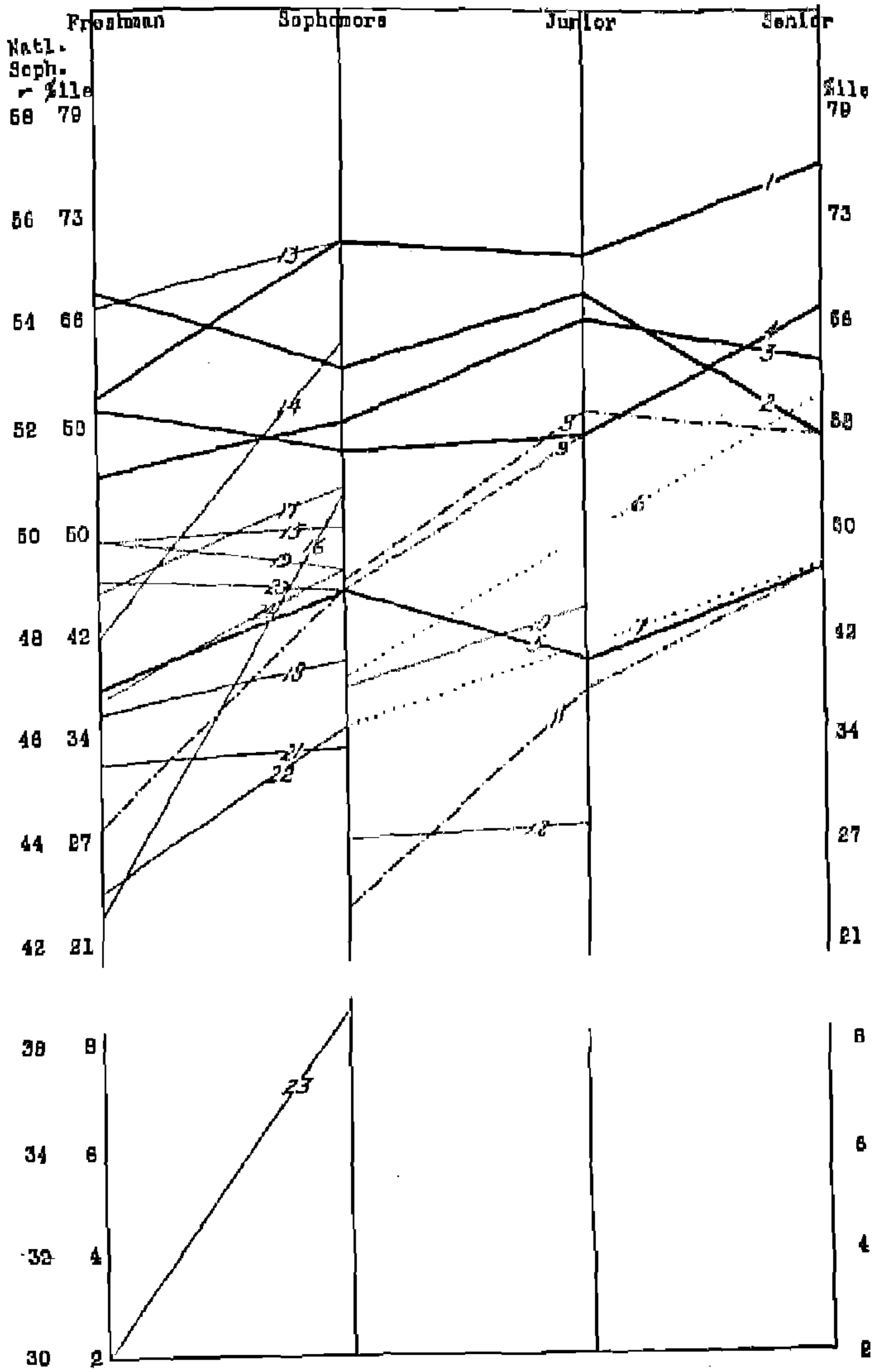


Chart 9b.—Graphs of class averages on the English test of individual colleges that tested two or more classes. See Chart 9a.

granted. The small differences between class averages and the extensive overlapping of classes shown in Charts 7, 8, and 9a and 9b are of a piece with those of Tables 4 and 5 and Chart 4, and suggest the same implications. It is obvious that both individual credits and institutional accreditation have been granted on the basis of conditions, influences, and conduct, which, although important for certain purposes, are far from being determiners or adequate criteria of the types of achievement measured by the tests used in this program. It seems clear from the available evidence that institutional accreditation is at least as well founded and as accurately and consistently administered as the granting of credits to individual students within institutions. The ambiguities of institutonal accreditation derive from the same weakness as the ambiguities of credits within single institutions—the subjectivity, lack of comparability, and partial irrelevance of the measures used. It seems clear that many if not most of the ambiguities of institutional accreditation and of individual credits might be mitigated if more direct, objective, and comparable methods of individual appraisal could be introduced into our colleges and high schools.

V. CORRELATION DATA

Reliability of 1933 College Tests.—Reliability coefficients for the tests used in the 1933 college testing program are shown in Table 8. These coefficients are derived from correlations between the odd-even halves of each test, raised by the Spearman-Brown formula, and corrected for range. Only one odd-even correlation was calculated for each of the four foreign language tests, but this one correlation has been corrected to the range of each credit group shown in Table 2.

Correlations of Tests with Average College Grades.—Correlations between average college grade and scores on several of the tests have been calculated for 42 classes in 27 colleges, the aggregate number of cases being between 2,000 and 3,000 for the General Culture, English, Combined Score, and General Science tests, and more than 1,000 for the General

TABLE 8.—Reliability coefficients for each of the tests used in the 1933 college testing program. These coefficients are odd-even r's raised by the Spearman-Brown formula, and corrected for range by using the sigmas shown in Tables 1 and 2. The reliability coefficient for the combined score of the English, General Culture, and Literary Acquaintance tests is estimated (cf. Kelley, T. L., *Interpretation of Educational Measurements*, p. 73). The reliability coefficients in each case are based on 300 cases.

Test	Sigma	r_{11}	Test	Sigma	r_{11}
GENERAL CULTURE			FRENCH		
Fine Arts	24.4	.9544	1-1½ years	49.5	.9727
Foreign Literature	27.8	.9452	2-2½ years	52.4	.9757
History & Soc. St.	36.2	.9533	3-3½ years	53.7	.9768
Total	77.7	.9782			
			SPANISH		
ENGLISH SERIES 1			1-1½ years	48.7	.9800
Usage	17.7	.9377	2-2½ years	51.7	.9823
Spelling	13.4	.9455	3-3½ years	52.1	.9825
Vocabulary	18.2	.9534			
Total	42.8	.9685	GERMAN		
			1-1½ years	50.8	.9772
LITERARY ACQUAINTANCE	31.6	.9611	2-2½ years	57.9	.9824
			3-3½ years	59.2	.9832
GENERAL SCIENCE	24.4	.9287			
			LATIN		
GENERAL MATHEMATICS	23.8	.9659	1-1½ years	40.0	.9750
			2-2½ years	46.4	.9603
GENERAL CULTURE + ENGLISH			3-3½ years	46.3	.9601
+ LITERARY ACQUAINTANCE	140.9	.9875	4+ years	54.2	.9709

Mathematics test. The correlations range from an extreme of 0.84 to an extreme of 0.15, the median correlations being 0.53, 0.54, 0.57, 0.45, and 0.38, respectively, for the five test scores in the order mentioned above. In general, the correlations are higher for women's than for men's colleges. In three colleges correlations for four classes, and in four colleges correlations for two classes, were computed. The average correlations for the classes are practically identical. The correlations for the smaller colleges tend to be higher than for the larger.

The correlations for General Science are lower than for the linguistic tests, and those for General Mathematics are still lower. This is probably due in large part to the small influence of science and mathematics grades on the average college grades of freshmen and sophomores. The science and mathematics majors represent only a small minority of the students involved in these correlations. It should be remembered, of course, that the General Science and General Mathematics tests were not designed for majors in these fields. In order to measure fairly the achievements of majors in science and mathematics, longer and more specialized tests are needed. The committee confidently expects to be able to offer such tests for the 1934 program, at least in physics, chemistry, zoology, botany, geology, and advanced mathematics.

The General Science and General Mathematics tests used in the 1933 program were designed for Liberal Arts students, for the purpose of obtaining at least a rough measure of their general cultural acquaintance with the whole field of science and of elementary mathematics. Longer tests would have been much more desirable in both fields, and more particularly in science; but longer tests might have proved to be too burdensome for many colleges, and the committee felt and still feels that a short test widely used would ultimately be more fruitful than a longer test used only in a minority of the participating colleges. The value of such general tests in science and mathematics lies not alone in the fact that they give at least rough measures of the liberal arts students' cultural acquaintance with these fields, but also in the fact that they call attention concretely to the need for more adequate tests for majors in science and mathematics. With these values in mind, the committee will offer similar general tests for the 1934 program, and also longer tests in each of the major branches of college science and mathematics.

In one of the participating colleges, more than 300 sophomores who took the 1933 tests had taken placement tests as entering freshmen in September, 1931. The English placement test was very similar to the Cooperative English test used in the present program. The correlation between these two English tests taken in September, 1931, and May, 1933, by over 300 sophomores is 0.77, while the correlations for the vocabulary and spelling sections are 0.84 and 0.71, respectively. The correlation of two-year average college grade with the 1931 English placement test is 0.47, and, with the 1933 English test, 0.47. (The sigmas for the 1933 English test involved in these correlations are: Total English, 30.4; Vocabulary, 11.8; spelling, 10.8.)

VI. CONCLUSION

The results of the 1933 testing program detailed in the foregoing pages suggest some general comments.

The basic need for the kind of work represented by this testing program arises from the variety of types of students found in college classes. The proportion of failures and the handicap on instruction caused by the presence of many students of low ability are matters of almost universal comment. It is commonly believed that these situations arise largely from the great growth in college attendance and the conditions of mass instruction. In fact, the trouble arises from the lack of adjustment between the changing student body and the curriculum and objectives of instruction. The new problems that have arisen have not been met by new aims and organization. The curriculum has undergone slight change as compared with the changes in the student body. If the standardized curriculum was suited to the types of students in colleges forty years ago, it is evident that among the present great numbers and under the new social and economic conditions there are many people in college for whom the traditional curriculum is not appropriate. Adjustments have to be made both in the preparation and selection of students and in the curriculum offerings in relation to interests and future occupation of individual students. The assumption by college faculties that their work is related wholly to the perpetuation of the tradition of the scholar and teacher and to training for the Christian ministry has led to the separation of special schools for professional training. Now we are faced with the truth that the field of scholarship or culture is different for each individual because of his inherited traits, his background of experience and his need of training for his special place in life. The colleges can no longer mantain a standardized curriculum for all. They must make a curriculum for each individual.

The college is obligated to offer instruction in the general field of human knowledge, and from these wide offerings it has the responsibility to select that which is best suited to each individual. The college must offer to students the instruction that will enable them to succeed instead of failing, as many of them must when confronted with a curriculum standardized for the hypothetical "typical" student or for "all" students. Every specific case of a student who completes the high school, is admitted to college, takes the studies we recommend, and flunks some or all of them is a challenge to the prevailing system. The college evidently made an error either in admitting the student or in directing him to certain subjects. In most cases the high schools also made an error either in recommending him for college or in allowing him to pursue a course which implies continuation in college. The greatest responsibility placed upon high schools and colleges is to discover the abilities of the student. The college should give placement tests in order to find out what parts of its total offerings are appropriate for the individual entrant, and the high school should give annually such tests as will lead to a more reliable decision for or against college. If against, then the high school must give the pupil instruction from that time on suitable to some occupation for which he appears to be fitted.

Placement with regard to curriculum offerings is one aspect of the problem. The other is guidance with regard to life opportunities in preparation for which training is sought through the curriculum. Colleges and high schools should cooperate in insisting on and administering diagnostic tests each year, setting up advisory programs in the secondary school and in making every possible effort to see that, as long as the individual student is carried on in school, he is directed into some combination of studies appropriate to him. The projects fostered by this committee are intended to help high schools and colleges to meet these responsibilities.

The committee is very anxious to have it understood that it has no desire to control or influence the curriculum. If what has just been said be rightly understood, it must be evident that ideally the curriculum is determined by the individual student in cooperation with his teacher-adviser. The objective of the educational system is not to secure the absorption of accumulated human culture by teaching pupils in the mass, but to nourish and develop the powers of each individual through studies and experiences selected with reference to those powers. This being true, there is no curriculum; but a multitude of individual curricula. The inheritance and experience of the individual determine his curriculum through his own initiative and the insight and wisdom of his teacher-adviser. The tests which are being used for guidance are not geared to any particular curriculum but cover materials basic to all curricula.

It is assumed that the usual tests and examinations will continue to be given in each school. The achievement tests are offered to secure additional information which will be comparable from year to year and widely understandable. Indeed the committee anticipates that the usual course examinations will have more uniform and definite meaning when used in conjunction with these comparable tests.

The results of the 1932 and 1933 testing programs reveal the magnitude of the differences that have long been known to exist among colleges, even among the colleges which have been accredited by the highest accrediting agencies. They show also an amazing variability of test scores among individuals within each college. In range of scores the colleges overlap to a great extent and the differences are primarily differences between individuals. The total range of individual scores is a rough measure of the college student body in this country. This student body can be much modified, and for the best interests of the country, by bringing into it students of high quality who now do not have the money to go to college and by denying admission to those who can profit little by schooling of the type offered in college. When the testing and guidance programs have accomplished this, the college student body will still present an enormous range of general ability and of special abilities. This is the fundamental fact in higher education. It is perfectly clear that the general student body will not, during any time that we can foresee, present a homogeneity sufficient to justify the imposition of a standardized curriculum like the present one. If we take students into colleges at all, we must give them a chance to do what they can do best. No institution has a right to require a curriculum for a student body if its faculty knows in advance that 20, 30 or 40 per cent are going to fail. Suiting the curriculum to the student does not mean a lowering of standards but opens the way to higher standards for those who can do each order of work. Against the present system with its low standards expressed by the gentleman's grade must be set up a system of differentiated instruction in which each student's standard is the limit of his own powers to perform in the interest of his success in life.

Beginnings of this differentiation have been made in the General College at Minnesota and in the similar units announced at the Universities of Indiana, North Carolina, Louisville and Southern California. At Columbia College the dean and executive committee are authorized to make adjustments in the requirements for graduation wherever they should be made. This means that in individual cases a study which has been considered an absolute requirement may be omitted. At Minnesota, the dean is authorized to appoint a special adviser for any individual student, who will arrange the entire curriculum in the senior college to fit the peculiar needs of that individual. For students whose objectives or interests carry them into two or more colleges, a separate unit known as the University College performs the same service.

The movement toward differentiation of groups which can be adequately cared for as groups has only begun. Within the groups interested in high scholarship both in the college and the graduate school an organization genuinely on the individual basis is demanded. The comparison between colleges is too often merely invidious. The results of the testing programs show that the colleges high in the list have some poor students, those low in the list have some very good students. Curriculum changes are necessary in the interests of both. In any case the enormous differences within each college bring out the ambiguity of degrees. Degrees and certificates should be made meaningful by indication of the type and order of work completed.

For the present the stamp of approval given by an accrediting agency or the average performance of a college on tests having adequate norms are not so significant as the extent to which the college makes the best possible diagnosis of individual needs and provides curriculum opportunities so that the student may develop along the lines of his abilities and interests at a rate which he himself determines.

Respectfully submitted,
THE COMMITTEE ON EDUCATIONAL TESTING,

F. S. Beers,
Secretary.
S. P. Capen,
G. W. Frasier,
V. A. C. Henmon,
J. B. Johnston,
Chairman.

Max McConn,
F. L. McVey,
G. M. Ruch,
L. M. Terman,
G. A. Works,
C. S. Yoakum,
G. F. Zook.

Accredited Higher Institutions

IN 1924 the American Council on Education approved and published two reports of its Committee on Standards, recommending uniform standards as criteria for accrediting colleges, teacher-training institutions and junior colleges. Since then the various regional associations have worked continuously on this problem, have revised their respective lists each year and are gradually working toward uniform standards.

The following list is merely a compilation as of September 1, 1933, of the lists of the established accrediting agencies; namely, the Association of American Universities, the Middle States Association of Colleges and Secondary Schools, the North Central Association of Colleges and Secondary Schools, the Northwest Association of Secondary and Higher Schools and the Southern Association of Colleges and Secondary Schools.

In the New England Association of Colleges and Secondary Schools, the standards set up for institutional membership are equivalent to those required for accrediting by the other regional associations. Therefore the institutional members of the New England Association are also included in this list.

It will be noted that the five regional associations of colleges and secondary schools just mentioned cover among them the entire United States with the exception of the far southwest. Hence institutions in that region would not appear in the following list unless they appear on the list of the Association of American Universities, which is a national list.

The American Council on Education has printed as a separate pamphlet its recommendations concerning standards for accrediting higher institutions. Copies of this pamphlet and of the accompanying list will be sent without charge on request, addressed to the office of the Council.

ALABAMA

Alabama College, Montevallo
Alabama Polytechnic Institute, Auburn
Birmingham-Southern College, Birmingham
Howard College, Birmingham
Judson College, Marion
Spring Hill College, Spring Hill
Talladega College, Talladega
University of Alabama, University
Woman's College of Alabama, Montgomery

ARIZONA

Arizona State Teachers College, Flagstaff
Arizona State Teachers College, Tempe
University of Arizona, Tucson

ARKANSAS

Arkansas State Teachers College, Conway
College of the Ozarks, Clarksville
Hendrix College, Conway
State Agricultural and Mechanical College, Jonesboro
University of Arkansas, Fayetteville

CALIFORNIA

California Institute of Technology, Pasadena
Claremont Colleges (Pomona; Scripps), Claremont
College of the Holy Names, Oakland
College of the Pacific, Stockton
Dominican College of San Rafael, San Rafael
Immaculate Heart College, Hollywood
Loyola University, Los Angeles
Mills College, Oakland
Mt. St. Mary's College, Los Angeles
Occidental College, Los Angeles
Pacific Union College, Angwin
St. Mary's College, St. Mary's
Stanford University, Stanford University
State Teachers College, San Diego
University of California, Berkeley
University of California, Los Angeles
University of Santa Clara, Santa Clara
University of San Francisco, San Francisco
University of Redlands, Redlands
University of Southern California, Los Angeles
Whittier College, Whittier

COLORADO

Colorado Agricultural College, Fort Collins
Colorado College, Colorado Springs
Colorado School of Mines, Golden
Colorado State Teachers College, Greeley
Loretto Heights College, Denver
University of Colorado, Boulder
University of Denver, Denver
Western State College of Colorado, Gunnison

CONNECTICUT

Albertus Magnus College, New Haven
Connecticut State College, Storrs
Connecticut College for Women, New London
Trinity College, Hartford
Wesleyan University, Middletown
Yale University, New Haven

DELAWARE

University of Delaware, Newark

DISTRICT OF COLUMBIA

American University, Washington, D. C.
Catholic University of America, Washington, D. C.
George Washington University, Washington, D. C.
Georgetown University, Washington, D. C.
Howard University, Washington, D. C.
Trinity College, Washington, D. C.

FLORIDA

Florida State College for Women, Tallahassee
John B. Stetson University, De Land
Rollins College, Winter Park
University of Florida, Gainesville

GEORGIA

Agnes Scott College, Decatur
Atlanta University, Atlanta
Brenau College, Gainesville
Emory University, Atlanta
Georgia School of Technology, Atlanta
Georgia State College for Women, Milledgeville
Georgia State Teachers College, Athens
Georgia State Woman's College, Valdosta
Mercer University, Macon
Morehouse College, Atlanta
Shorter College for Women, Rome
Spellman College, Atlanta
University of Georgia, Athens
Wesleyan College, Macon

HAWAII

University of Hawaii, Honolulu

IDAHO

College of Idaho, Caldwell
University of Idaho, Moscow

ILLINOIS

Armour Institute of Technology, Chicago
Bradley Polytechnic Institute, Peoria
Carthage College, Carthage
De Paul University, Chicago
Eureka College, Eureka
Illinois College, Jacksonville
Illinois State Normal University, Normal
Illinois State Normal University (Southern), Carbondale
Illinois State Teachers College (Eastern), Charleston
Illinois State Teachers College (Northern), De Kalb
Illinois State Teachers College (Western), Macomb
Illinois Wesleyan University, Bloomington
James Millikin University, Decatur
Knox College, Galesburg
Lake Forest College, Lake Forest
Lewis Institute, Chicago
Loyola University, Chicago
MacMurray College for Women, Jacksonville
McKendree College, Lebanon
Monmouth College, Monmouth
North Central College, Naperville
Northwestern University, Evanston
Rockford College, Rockford
Rosary College, River Forest
Shurtleff College, Alton
University of Chicago, Chicago
University of Illinois, Urbana
Wheaton College, Wheaton

INDIANA

Ball State Teachers College, Muncie
Butler University, Indianapolis
De Pauw University, Greencastle
Earlham College, Richmond
Evansville College, Evansville
Franklin College of Indiana, Franklin
Hanover College, Hanover
Indiana State Teachers College, Terre Haute
Indiana University, Bloomington
Manchester College, North Manchester
Purdue University, Lafayette
Rose Polytechnic Institute, Terre Haute
St. Mary's College, Notre Dame
St. Mary of the Woods College, St. Mary of the Woods
University of Notre Dame du Lac, Notre Dame
Valparaiso University, Valparaiso
Wabash College, Crawfordsville

IOWA

Clarke College, Dubuque
Coe College, Cedar Rapids
Columbia College of Dubuque, Dubuque
Cornell College, Mt. Vernon
Drake University, Des Moines
Grinnell College, Grinnell
Iowa State College of Agriculture and Mechanic Arts, Ames
Iowa State Teachers College, Cedar Falls
Iowa Wesleyan College, Mt. Pleasant
Luther College, Decorah

Morningside College, Sioux City
Parsons College, Fairfield
St. Ambrose College, Davenport
Simpson College, Indianola
University of Dubuque, Dubuque
University of Iowa, Iowa City

KANSAS

Baker University, Baldwin
Bethany College, Lindsborg
College of Emporia, Emporia
Fort Hays Kansas State College, Hays
Friends University, Wichita
Kansas State College of Agriculture and Applied Science, Manhattan
Kansas State Teachers College of Emporia, Emporia
Kansas State Teachers College, Pittsburg
Marymount College, Salina
Ottawa University, Ottawa
Southwestern College, Winfield
St. Benedict's College, Atchison
Sterling College, Sterling
University of Kansas, Lawrence
Washburn College, Topeka

KENTUCKY

Berea College, Berea
Centre College of Kentucky, Danville
Eastern Kentucky State Teachers College, Richmond
Georgetown College, Georgetown
Morehead State Teachers College, Morehead
Murray State Teachers College, Murray
Transylvania College, Lexington
Union College, Barbourville
University of Kentucky, Lexington
University of Louisville, Louisville
Western Kentucky State Teachers College, Bowling Green

LOUISIANA

Centenary College of Louisiana, Shreveport
Louisiana College, Pineville
Louisiana Polytechnic Institute, Ruston
Louisiana State University, Baton Rouge
Loyola University, New Orleans
Newcomb College, New Orleans
Southwestern Louisiana Institute, Lafayette
State Normal College, Natchitoches
Tulane University of Louisiana, New Orleans

MAINE

Bates College, Lewiston
Bowdoin College, Brunswick
Colby College, Waterville
University of Maine, Orono

MARYLAND

College of Notre Dame of Maryland, Baltimore
Goucher College, Baltimore
Hood College, Frederick
Johns Hopkins University, Baltimore
Loyola College, Baltimore
Morgan College, Baltimore
Mt. St. Mary's College, Emmitsburg
St. John's College, Annapolis
St. Joseph's College, Emmitsburg
United States Naval Academy, Annapolis
University of Maryland, College Park
Washington College, Chestertown
Western Maryland College, Westminster

MASSACHUSETTS

American International College, Springfield
Amherst College, Amherst
Boston College, Chestnut Hill
Boston University, Boston
Clark University, Worcester
College of the Holy Cross, Worcester
Emmanuel College, Boston
Harvard University, Cambridge
International Y. M. C. A. College, Springfield
Massachusetts Institute of Technology, Cambridge
Massachusetts State College, Amherst
Mt. Holyoke College, South Hadley
Radcliffe College, Cambridge
Regis College, Weston
Simmons College, Boston
Smith College, Northampton
Tufts College, Medford
Wellesley College, Wellesley
Wheaton College, Norton
Williams College, Williamstown
Worcester Polytechnic Institute, Worcester

MICHIGAN

Albion College, Albion
Alma College, Alma
Battle Creek College, Battle Creek
Calvin College, Grand Rapids
Colleges of the City of Detroit, Detroit
Hillsdale College of Michigan, Hillsdale
Hope College, Holland
Kalamazoo College, Kalamazoo
Marygrove College, Detroit
Michigan College of Mining and Technology, Houghton
Michigan State College of Agriculture and Applied Science, East Lansing
Michigan State Normal College, Ypsilanti
Michigan State Teachers College (Central), Mount Pleasant
Michigan State Teachers College (Western), Kalamazoo
Michigan State Teachers College (Northern), Marquette
University of Detroit, Detroit
University of Michigan, Ann Arbor

MINNESOTA

Carleton College, Northfield
College of St. Benedict, St. Joseph

College of St. Catherine, St. Paul
College of St. Scholastica, Duluth
College of St. Teresa, Winona
College of St. Thomas, St. Paul
Concordia College, Moorhead
Gustavus Adolphus College, St. Peter
Macalester College, St. Paul
St. Olaf College, Northfield
University of Minnesota, Minneapolis

MISSISSIPPI

Blue Mountain College, Blue Mountain
Delta State Teachers College, Cleveland
Millsaps College, Jackson
Mississippi College, Clinton
Mississippi State College, State College
Mississippi State College for Women, Columbus
Mississippi State Teachers College, Hattiesburg
Mississippi Woman's College, Hattiesburg
University of Mississippi, University

MISSOURI

Central College, Fayette
Culver-Stockton College, Canton
Drury College, Springfield
Harris Teachers College, St. Louis
Lindenwood College, St. Charles
Missouri State Teachers College (Central), Warrensburg
Missouri State Teachers College (Northeast), Kirksville
Missouri State Teachers College (Northwest), Maryville
Missouri State Teachers College (Southeast), Cape Girardeau
Missouri State Teachers College (Southwest), Springfield
Missouri Valley College, Marshall
Park College, Parkville
St. Louis University, St. Louis
Tarkio College, Tarkio
University of Missouri, Columbia
Washington University, St. Louis
Webster College for Women, Webster Groves
Westminster College, Fulton
William Jewell College, Liberty

MONTANA

Montana State College, Bozeman
Montana State School of Mines, Butte
Carroll College, Helena
State University of Montana, Missoula

NEBRASKA

Creighton University, Omaha
Doane College, Crete
Hastings College, Hastings
Nebraska State Normal School, Chadron
Nebraska State Normal School and Teachers College, Kearney
Nebraska State Teachers College, Wayne
Nebraska Wesleyan University, Lincoln
Peru State Teachers College, Peru
University of Nebraska, Lincoln

NEVADA

University of Nevada, Reno

NEW HAMPSHIRE

Dartmouth College, Hanover
University of New Hampshire, Durham

NEW JERSEY

Brothers College, Madison
College of St. Elizabeth, Convent Station
Georgian Court College, Lakewood
New Jersey College for Women, New Brunswick
Princeton University, Princeton
Rutgers University, New Brunswick
Seton Hall College, South Orange
Stevens Institute of Technology, Hoboken

NEW MEXICO

New Mexico College of Agriculture and Mechanic Arts, State College
University of New Mexico, Albuquerque

NEW YORK

Adelphi College, Garden City
Alfred University, Alfred
Barnard College, New York City
Canisius College of Buffalo, Buffalo
City College, New York City
Clarkson School of Technology, Potsdam
Colgate University, Hamilton
College of Mt. St. Vincent, Mt. St. Vincent-on-Hudson
College of New Rochelle, New Rochelle
College of the Sacred Heart, New York City
College of St. Rose, Albany
Columbia University, New York City
Cornell University, Ithaca
D'Youville College, Buffalo
Elmira College, Elmira
Fordham University, Fordham
Good Counsel College, White Plains
Hamilton College, Clinton
Hobart College, Geneva
Hunter College of the City of New York, New York City
Keuka College, Keuka Park
Manhattan College, New York City
Marymount College, Tarrytown-on-Hudson
Nazareth College, Rochester
New York State College for Teachers, Albany
New York University, New York City
Niagara University, Niagara
Polytechnic Institute of Brooklyn, Brooklyn
Rensselaer Polytechnic Institute, Troy
Russell Sage College, Troy
St. Bonaventure's College and Seminary, St. Bonaventure
St. John's College, Brooklyn

St. Joseph's College for Women, Brooklyn
St. Lawrence University, Canton
St. Stephen's College, Annandale
Skidmore College, Saratoga Springs
Syracuse University, Syracuse
Union College, Schenectady
United States Military Academy, West Point
University of Buffalo, Buffalo
University of Rochester, Rochester
Vassar College, Poughkeepsie
Wells College, Aurora
William Smith College, Geneva

NORTH CAROLINA

Catawba College, Salisbury
Davidson College, Davidson
Duke University, Durham
East Carolina State Teachers College, Greenville
Greensboro College, Greensboro
Guilford College, Guilford College
Lenoir-Rhyne College, Hickory
Meredith College, Raleigh
North Carolina College for Women, Greensboro
North Carolina State College of Agriculture and Engineering, Raleigh
Queens-Chicora College, Charlotte
Salem College, Winston-Salem
University of North Carolina, Chapel Hill
Wake Forest College, Wake Forest

NORTH DAKOTA

Jamestown College, Jamestown
North Dakota Agricultural College, Fargo
University of North Dakota, Grand Forks

OHIO

Antioch College, Yellow Springs
Ashland College, Ashland
Baldwin Wallace College, Berea
Bowling Green State College, Bowling Green
Capital University, Columbus
Case School of Applied Science, Cleveland
College of Mt. St. Joseph on the Ohio, Mt. St. Joseph
College of Wooster, Wooster
Denison University, Granville
Findlay College, Findlay
Heidelberg College, Tiffin
Hiram College, Hiram
John Carroll University, Cleveland
Kent State College, Kent
Lake Erie College, Painesville
Marietta College, Marietta
Mary Manse College, Toledo
Miami University, Oxford
Mt. Union College, Alliance
Muskingum College, New Concord
Notre Dame College, South Euclid
Oberlin College, Oberlin
Ohio State University, Columbus
Ohio University, Athens
Ohio Wesleyan University, Delaware
Otterbein University, Westerville
University of Akron, Akron
University of Cincinnati, Cincinnati
University of the City of Toledo, Toledo
University of Dayton, Dayton
Ursuline College, Cleveland
Western College, Oxford
Western Reserve University, Cleveland
Wittenberg College, Springfield
Xavier University, Cincinnati

OKLAHOMA

Oklahoma Agricultural and Mechanical College, Stillwater
Oklahoma College for Women, Chickasha
Phillips University, Enid
University of Oklahoma, Norman
University of Tulsa, Tulsa

OREGON

Albany College, Albany
Linfield College, McMinnville
Marylhurst College, Oswego
Mt. Angel College, Mt. Angel
Oregon State Agricultural College, Corvallis
Pacific University, Forest Grove
Reed College, Portland
University of Oregon, Eugene
Willamette University, Salem

PENNSYLVANIA

Albright College, Reading
Allegheny College, Meadville
Bryn Mawr College, Bryn Mawr
Bucknell University, Lewisburg
Carnegie Institute of Technology, Pittsburgh
Dickinson College, Carlisle
Drexel Institute, Philadelphia
Franklin and Marshall College, Lancaster
Geneva College, Beaver Falls
Gettysburg College, Gettysburg
Grove City College, Grove City
Haverford College, Haverford
Immaculata College, Immaculata
Juniata College, Huntingdon
Lafayette College, Easton
LaSalle College, Philadelphia
Lebanon Valley College, Annville
Lehigh University, Bethlehem
Lincoln University, Lincoln University
Marywood College, Scranton
Mercyhurst College, Erie
Moravian College and Theological Seminary, Bethlehem
Mt. St. Joseph College, Philadelphia
Muhlenberg College, Allentown
Pennsylvania College for Women, Pittsburgh
Pennsylvania State College, State College
Rosemont College, Rosemont
St. Joseph's College, Philadelphia

St. Thomas College, Scranton
St. Vincent College, Latrobe
Seton Hill College, Greensburg
Susquehanna University, Selinsgrove
Swarthmore College, Swarthmore
Temple University, Philadelphia
Thiel College, Greenville
University of Pennsylvania, Philadelphia
University of Pittsburgh, Pittsburgh
Ursinus College, Collegeville
Villanova College, Villanova
Washington and Jefferson College, Washington
Westminster College, New Wilmington
Wilson College, Chambersburg

RHODE ISLAND

Brown University, Providence
Pembroke College, Providence
Providence College, Providence
Rhode Island State College, Kingston

SOUTH CAROLINA

Clemson Agricultural College of South Carolina, Clemson
Coker College, Hartsville
College of Charleston, Charleston
Converse College, Spartanburg
Erskine College, Due West
Furman University, Greenville
Limestone College, Gaffney
Presbyterian College of South Carolina, Clinton
The Citadel, Charleston
University of South Carolina, Columbia
Winthrop College, Rock Hill
Wofford College, Spartanburg

SOUTH DAKOTA

Augustana College, Sioux Falls
Dakota Wesleyan University, Mitchell
Huron College, Huron
Sioux Falls College, Sioux Falls
South Dakota State College of Agriculture and Mechanic Arts, Brookings
South Dakota State School of Mines, Rapid City
University of South Dakota, Vermillion
Yankton College, Yankton

TENNESSEE

Carson-Newman College, Jefferson City
Fisk University, Nashville
George Peabody College for Teachers, Nashville
Maryville College, Maryville
Southwestern, Memphis
Tennessee State Teachers College, Johnson City
Tennessee State Teachers College, Memphis
Tennessee State Teachers College, Murfreesboro

TEXAS

Tusculum College, Greeneville
University of Chattanooga, Chattanooga
University of the South, Sewanee
University of Tennessee, Knoxville
Vanderbilt University, Nashville
Agricultural and Mechanical College of Texas, College Station
Baylor College for Women, Belton
Baylor University, Waco
East Texas State Teachers College, Commerce
Incarnate Word College, San Antonio
North Texas State Teachers College, Denton
Our Lady of the Lake College, San Antonio
Rice Institute, Houston
Sam Houston State Teachers College, Huntsville
Simmons University, Abilene
Southern Methodist University, Dallas
Southwest Texas State Teachers College, San Marcos
Southwestern University, Georgetown
Stephen F. Austin State Teachers College, Nagadoches
Sul Ross State Teachers College, Alpine
Texas Christian University, Fort Worth
Texas State College for Women, Denton
Texas Technological College, Lubbock
Trinity University, Waxahachie
University of Texas, Austin
West Texas State Teachers College, Canyon

UTAH

Brigham Young University, Provo
University of Utah, Salt Lake City
Utah Agricultural College, Logan

VERMONT

Middlebury College, Middlebury
University of Vermont, Burlington

VIRGINIA

Bridgewater College, Bridgewater
College of William and Mary in Virginia, Williamsburg
Emory and Henry College, Emory
Hampden-Sydney College, Hampden-Sydney
Hampton Institute, Hampton
Hollins College, Hollins
Lynchburg College, Lynchburg
Mary Baldwin College, Staunton
Randolph-Macon College for Men, Ashland
Randolph-Macon Woman's College, Lynchburg
Roanoke College, Salem
State Teachers College, East Radford
State Teachers College, Farmville
State Teachers College, Fredericksburg
State Teachers College, Harrisonburg
Sweet Briar College, Sweet Briar
University of Richmond, Richmond
University of Virginia, Charlottesville

Virginia Military Institute, Lexington
Virginia Agricultural College and Polytechnic Institute, Blacksburg
Washington and Lee University, Lexington

WASHINGTON

College of Puget Sound, Tacoma
Gonzaga University, Spokane
State College of Washington, Pullman
University of Washington, Seattle
Whitman College, Walla Walla
Whitworth College, Spokane

WEST VIRGINIA

Bethany College, Bethany
Concord State Teachers College, Athens
Marshall College, Huntington
West Virginia State College, Institute
West Virginia University, Morgantown

WISCONSIN

Beloit College, Beloit
Carroll College, Waukesha
Lawrence College, Appleton
Marquette University, Milwaukee
Milwaukee-Downer College, Milwaukee
Mount Mary College, Milwaukee
Ripon College, Ripon
State Teachers College, Superior
Stout Institute, Menomonie
University of Wisconsin, Madison
Wisconsin State Teachers College, LaCrosse
Wisconsin State Teachers College, Milwaukee
Wisconsin State Teachers College, Oshkosh

WYOMING

University of Wyoming, Laramie

Teachers' Colleges

IDAHO

State Normal School, Albion
State Normal School, Lewiston

MINNESOTA

State Teachers' College, Moorhead
State Teachers' College, Winona
St. Cloud State Teachers' College, St. Cloud

MISSOURI

Lincoln University, Jefferson City

MONTANA

Eastern Montana Normal School, Billings
Montana State Normal School, Dillon

NORTH DAKOTA

North Dakota State Normal School, Dickinson
State Normal and Industrial School, Ellendale
State Normal School, Maryville
State Teachers' College, Valley City
Teachers' College, Minot

OHIO

State Normal College, Bowling Green

OKLAHOMA

Central State Teachers' College, Edmond
East Central State Teachers' College, Ada
Northeastern State Teachers' College, Tahlequah
Northwestern State Teachers' College, Alva
Southeastern State Teachers' College, Durant
Southwestern State Teachers' College, Weatherford

OREGON

Eastern Oregon State Normal School, La Grande
Marylhurst Normal School, Oswego
Mt. Angel Normal School, Mt. Angel
Southern Oregon Normal School, Ashland
State Normal School, Monmouth

SOUTH DAKOTA

North Normal and Industrial School, Aberdeen

WASHINGTON

Holy Names Normal School, Spokane
Seattle Pacific College, Seattle
State Normal School, Bellingham
State Normal School, Cheney
State Normal School, Ellensburg

WEST VIRGINIA

West Virginia State Normal School, Fairmont

Junior Colleges

ALABAMA

Marion Institute, Marion
St. Bernard College, St. Bernard

ARIZONA

Phoenix Junior College, Phoenix

ARKANSAS

Arkansas Agricultural and Mechanical College, Monticello
Arkansas Polytechnic Institute, Russellville
Central Junior College, Conway
Little Rock Junior College, Little Rock

State Agricultural and Mechanical College, Magnolia

CALIFORNIA

Southern California Junior College, Arlington

COLORADO

Colorado Women's College, Denver
Regis College, Denver

CONNECTICUT

Junior College of Connecticut, Bridgeport

FLORIDA

St. Petersburg Junior College, St. Petersburg

GEORGIA

Andrew College, Cuthbert
Junior College of Augusta, Augusta
State Agricultural and Normal College, Americus

IDAHO

University of Idaho, Southern Branch, Pocatello
Northwest Nazarene College, Nampa

ILLINOIS

Blackburn College, Carlinville
Crane Junior College, Chicago
Elmhurst College, Elmhurst
Frances Shimer School, Mount Carroll
Joliet Junior College, Joliet
La Salle-Peru-Oglesby Junior College, La Salle
Lincoln College, Lincoln
Lyons Township Junior College, La Grange
Monticello Seminary, Godfrey
Morton Junior College, Cicero
North Park Junior College, Chicago
Springfield Junior College, Springfield
Thornton Township Junior College, Harvey
Y. M. C. A. School of Liberal Arts, Chicago

INDIANA

St. Joseph's College, Collegeville

IOWA

Graceland College, Lamoni
Mason City Junior College, Mason City
Mt. Mercy Junior College, Cedar Rapids
Ottumwa Heights College, Ottumwa

KANSAS

St. Mary College, The, Leavenworth

KENTUCKY

Bethel Woman's College, Hopkinsville
Cumberland College, Williamsburg
Nazareth Junior College, Nazareth
Pikeville College, Pikeville
Sue Bennett College, London

MASSACHUSETTS

Junior College of Bradford Academy, Bradford
Lasell Seminary, Auburndale

MICHIGAN

Bay City Junior College, Bay City
Emmanuel Missionary College, Berrien Springs
Flint Junior College, Flint
Grand Rapids Junior College, Grand Rapids
Highland Park Junior College, Highland Park
Jackson Junior College, Jackson
Muskegon Junior College, Muskegon
Port Huron Junior College, Port Huron

MINNESOTA

Duluth Junior College, Duluth
Eveleth Junior College, Eveleth
Hibbing Junior College, Hibbing
Rochester Junior College, Rochester
Virginia Junior College, Virginia

MISSISSIPPI

Gulf Park College, Gulfport
Harrison-Stone-Jackson Agricultural High School and Junior College, Perkinston
Hinds Junior College, Raymond
Pearl River College, Poplarville
Sunflower County Junior College, Moorhead
Whitworth College, Brookhaven

MISSOURI

Christian College, Columbia
Flat River Junior College, Flat River
Junior College of Kansas City, Kansas City
Kemper Military School, Boonville
The Principia, St. Louis
St. Joseph Junior College, St. Joseph
Stephens Junior College, Columbia
Teachers College of Kansas City, Kansas City
Wentworth Military Academy, Lexington
William Woods College, Fulton

MONTANA

Intermountain Union College, Helena
Northern Montana College, Havre

NEBRASKA

Union College, College View

NEW JERSEY

Centenary Collegiate Institute, Hackettstown

NEW YORK

Packer Collegiate Institute, Brooklyn
Sarah Lawrence College, Bronxville
Seth Low Junior College, Brooklyn

NORTH CAROLINA

Mars Hill College, Mars Hill
St. Mary' School, Raleigh

OKLAHOMA

Northeastern Oklahoma Junior College, Miami

TENNESSEE

Hiwassee College, Madisonville
Nashville Agricultural Normal Institute, Madison
Tennessee Wesleyan College, Athens
Ward Belmont College, Nashville

TEXAS

Brownsville Junior College, Brownsville
Edinburg College, Edinburg
John Tarleton Agricultural College, Stephenville
Lon Morris College, Jacksonville
Mary Allen Seminary, Crockett
South Park College, Beaumont
Texarkana Junior College, Texarkana
Tyler Junior College, Tyler

UTAH

Snow College, Ephraim
St. Mary of the Wasatch Junior College, Salt Lake City
Weber College, Ogden

VIRGINIA

Averett College, Danville
Sullins College, Bristol
Virginia Intermont College, Bristol

WASHINGTON

Walla Walla College, College Place
St. Martin's College, Lacey

WEST VIRGINIA

Potomac State School, Keyser

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